

# GRAIN & FEED JOURNALS

CONSOLIDATED

Vol. XCII. No. 6

Chicago 4, Ill., U. S. A., March 22, 1944

Price \$2.00 Per Year, 25 Cents Per Copy

*A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter*

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Improved Concrete Elevator of California Mealalfa Co., at Dixon, Calif.  
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# Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$12 per year.

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in the GRAIN & FEED JOURNALS Consolidated make wants known to everyone connected with the grain trade. If you desire to buy or rent, sell or lease an elevator or anything used by grain dealers, try a want ad twice a month and your want will soon be satisfied.



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GRAIN MERCHANTS**

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If Not—Tell the Journal.**WOLCOTT & LINCOLN**Incorporated  
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Future orders executed in all markets.C. G. W. Elevator, Kansas City, Kans.  
Wellington Terminal Elev., Wellington, Kans.  
Leavenworth Elevator, Leavenworth, Kans.  
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Tables, extended to show bushels in large-  
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20,000 to	129,950 lbs. to bushels of	32 lbs.
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Personal Attention Plus Experienced Supervision Given Every  
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Any Grade—Any Quantity—Any Time

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*By Raising These New Varieties - -***TAMA, BOONE, VICLAND, VIKOTA, CONTROL or MARION**

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**THE QUAKER OATS COMPANY**

Continuous Buyers of Oats, Wheat, Corn, Barley

Grain Department  
 Chicago, Illinois

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See our "Elevator For Sale—Wanted" Department This Number



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*Designers and Builders*

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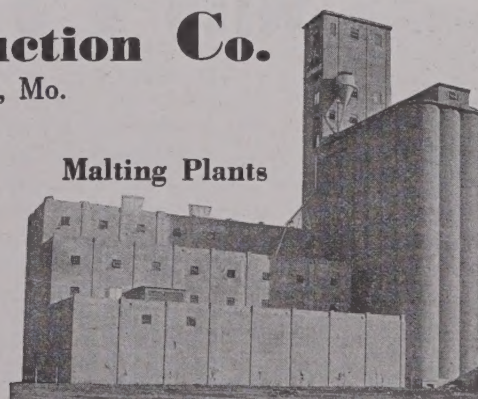
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Designed and constructed by us.



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# Wanted and For Sale

The rate for advertisements in this department is 25 cents per type line each insertion

## ELEVATORS FOR SALE

**OKLAHOMA**—8,000 capacity elevator and 8,000 bin room for sale account of ill health of manager. Address 92F12, Grain & Feed Journals, Chicago 4, Ill.

**SOUTHERN MICHIGAN** Elevator and feed mill for sale. Good retail and wholesale business in grain, feed and coal. Located at Athens, Mich. E. A. Wolfe, Shipshewana, Ind.

**CENTRAL ILLINOIS**—Excellent, going, grain, coal, feed and grinding business for sale. If you want a money maker investigate this property. Address 92F7, Grain & Feed Journals, Chicago.

**OKLAHOMA** 43,000 bus. iron clad elevator for sale. Kewanee air dump; 5 bu. Fairbanks scale; 10 ton truck scale. All in running order; located on main line AT&SF. Reason for sale, can't stand the dust. E. A. Johnston Grain Co., Capron, Okla.

**OKLAHOMA**—Flour and grain elevator for sale; semi-diesel and electric power; building convertible for grain storage; 600 feet Frisco trackage; feed warehouse; coal yard; 24 years in business, retiring. Address 92F6, Grain & Feed Journals, Chicago 4, Ill.

**FOR SALE**—Grain elevator, coal yard and lumber sheds on private ground, located on CCCSt.L.; capacity 11,000; coal handled 60 carloads, 102 high in last 24 years. Feed Grinding, Feed, Building Supplies, Paints, Hardware, etc. Community of 7,000 population. Rees J. Morgan, Jonesboro, Indiana.

**FOR SALE**—Grain elevator located on NYCSTL. 75 miles south of Toledo, showing average gross sales \$300,000 up. 30M capacity. All new equipment; 5 legs; 4 dumps; 2 cleaners; 2 shellers. Motorized throughout. Complete grinding equipment, double mixers. Good coal, feed and farm supply business. Making average net 20% on investment each year. L. J. Schuster, Produce Exchange, Toledo, O.

## ELEVATORS FOR SALE

**FOR SALE**—Grain elevator located on CCCSTL, east of Union City, Ind. 30M capacity. 3 legs; 4 dumps. Good feed equipment. Plenty floor space. 20% net on investment. L. J. Schuster, Produce Exchange, Toledo, O.

**MICHIGAN** bean elevator and warehouse for sale covering 10,000 sq. feet; well built; located between private RR sidings, two trunk lines, with transit, East, South, West. Fully equipped with cleaners, driers and 50 hp boiler; full line of bean cleaning and picking machinery, including 65 hand pickers. Capacity for handling for market, 20 to 40 cars per month. Another Agl. product can be manufactured, with good by-product for feed, now being partially installed. To reliable buyer who will protect it, willing to give use of our name and good will, which is well known and highly regarded from Atlantic to Pacific. Property offered for sale account owners health. Address 92F11, Grain & Feed Journals, Chicago 4, Ill.

## ELEVATORS WANTED

**WANTED TO BUY** grain elevator, with coal and feed business, in Indiana. Address 92E4, Grain & Feed Journals, Chicago 4, Ill.

**WANTED**—Small grain elevator and feed mill, with side lines—Illinois or Wisconsin. Must be a going concern. Give full particulars in first letter as to condition of buildings, amount of business last two years, profit, trade territory, competition, etc. Address 92E11, Grain & Feed Journals, Chicago 4, Ill.

## SAMPLE ENVELOPES

**SAMPLE ENVELOPES—SPEAR SAFETY**—for mailing samples of grain, feed and seed. Made of heavy kraft paper, strong and durable; size 4½x7 inches, \$2.50 per hundred, or 500, \$10.00 plus postage. Seed size 3½x5½ ins., per hundred \$2.00 plus postage. Grain & Feed Journals, 327 S. La Salle St., Chicago 4, Ill.

## FEMALE HELP WANTED

**TYPIST** of experience for permanent job in publishing office, 327 S. La Salle St., Room 729, Chicago 4, Ill.

## HELP WANTED

**WANTED**—Experienced feed plant engineer to take charge maintenance crew and new installations in large, rapidly expanding, progressive feed plant in Ohio. Address 92E10, Grain & Feed Journals, Chicago 4, Ill.

**WANTED**—2nd man for elevator and feed and seed business. Must be 4-F or beyond draft age. \$150.00 per month; increases in salary will be made as employee's work justifies them. Hughes Elevator, Riverton, Wyoming.

**WANTED**—Experienced elevator man capable of operating a large terminal grain elevator and able to handle a crew of men. Plant operated by electrical equipment. Good opportunity for right man. Address 92C12, Grain & Feed Journals, Chicago 4, Ill.

## RETAIL FEED MILL EXECUTIVE

If you are a money maker, can supervise men, and like the retail feed business, here is your opportunity to operate a going business for a well established midwest feed manufacturer. Write giving full qualifications. 92D8, Grain & Feed Journals, Chicago 4, Ill.

## SITUATION WANTED

**POSITION** wanted by grain buyer with accounting experience. Frank C. Klinger, Fessenden, N. D.

**WANTED**—Position as manager of elevator with gas station or lumber yard. Prefer western or central Kansas. Beyond draft age. Address 92D4, Grain & Feed Journals, Chicago 4, Ill.

**STOP! READ! THINK!** One advertiser writes, "Your service brought me 24 replies." We can do the same for you. Don't wait, write now.

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Large stock of motors and generators, A.C. and D.C., new and rebuilt, at attractive prices. Special bargains in hammermill motors 25 to 100 hp., 1,200 to 3,600 rpm. Send us your inquiries. Expert repair service. V. M. NUSSBAUM & CO., Fort Wayne, Indiana

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**BARGAIN IF TAKEN AT ONCE**—Some one is always looking for an elevator at a good grain point and reads these ads just like you're doing now, so if you wish to dispose of your present property, enlarge your present interests, or embark in the grain business, USE these columns to your best advantage just as others are doing. WE WILL assist you in the composition of copy free. We are in business to be of service to YOU. There is no wrong time to put an ad in the columns of the Journal. TRY IT.



The STEINLITE  
One Minute  
Moisture Tester

# SAVE TIME... with a STEINLITE

Moisture tests on grain can now be made in one minute. No longer is it necessary to heat the grain and wait and watch 20 or 30 minutes while the temperature rises to the correct shut-off point, as with other moisture testers. The Steinlite Electronic Moisture Tester eliminates all of this time-consuming effort because it is FAST. Your time is valuable; Save it with a Steinlite.

The Steinlite is ACCURATE—checked against official government oven methods.

EASY TO USE—almost as easy as tuning a radio.

INEXPENSIVE TO OPERATE—consumes no more electricity than a 40-watt bulb.

PORTABLE (light weight), neat and compact.

"HEADQUARTERS" for all Grain and Seed Testing Equipment.

## BOOK YOUR STEINLITE ORDER NOW!

We can make IMMEDIATE SHIPMENT from stock now. But if you wish to wait, permit us to make shipment within 60-day period, just ahead of your busy season. No down payment required . . . 10 day FREE trial.

Send for Seedburo Catalog No. 143.

**SEEDBURO**  
EQUIPMENT COMPANY



620 BROOKS BUILDING  
CHICAGO 6, ILLINOIS



**MACHINES FOR SALE**

**CORN CUTTER & Grader**—has motor—used very little. 91N8, Grain & Feed Jnl's., Chicago.

**FOR SALE**—New and used hammer mills; also other milling equipment. H. H. Hussey, Box 162, Albert Lea, Minn.

**FOR SALE**—No. 40 Blue Streak, no motors; one 60 hp. 3W22 Gruendler with motors. D. E. Hughes Co., Hopkins, Mich.

**FOR SALE**—One No. 3 Jay Bee portable grinder with molasses unit, 65 hp. Waukesha motor. Boonville Mills, Boonville, Ind.

**FOR SALE**—One Tag Hepp. moisture meter complete with both rolls. Address 92C13, Grain & Feed Journals, Chicago 4, Ill.

**FEED MIXER**—one-ton—floor level feed—has motor good as new. Write 91N9, Grain & Feed Journals, Chicago 4, Ill.

**HAMMER MILL** with 25-hp. motor and all attachments. Priced to sell. Write 91N10, Grain & Feed Journals, Chicago 4, Ill.

**FEED MIXER** for sale, has motor, and a late machine. Need space. Will sacrifice. Write 91N11, Grain & Feed Journals, Chicago 4, Ill.

**FOR SALE**—Machinery in a 150 bbl. flour mill; Wolf machinery; including a 90 hp. horizontal Buckeye Diesel engine, nearly new. Ben L. Yohe, Shady Bend, Kan.

**FOR SALE**—Two clipper cleaners, No. 147, for \$200. No. 157D for \$300. Both cleaners equipped with double elevators; in good working condition. Screens furnished. Ipava Farmers Elevator Co., Ipava, Ill.

**FOR SALE**—One 18" Engleberg huller double head attrition mill \$25. One Howes flour packer, 3 tubes, complete, \$90. Two Draver percentage feeders, mounted \$65. All in serviceable condition. Mills Elevator, Lorain, O.

**FOR SALE**—82 ft. 8 ply rubber belting, good; one 16 ft. endless leather belt, excellent; 140 ft. steel door track; air compressor, tank and connections, good condition; steel Kewanee truck dump, elevator boot and one small steel safe; also desks, counters and showcases. James O. Dougan, Pritchett, Colo.

**MACHINES FOR SALE**

**FOR SALE**—Hinman Gravity Cleaner, in first class condition. Address 92F5, Grain & Feed Journals, Chicago 4, Ill.

**TAG-HEPP. MOISTURE METER** for sale. Good condition. Address 92F8, Grain & Feed Journals, Chicago 4, Ill.

**FOR SALE**—One Link-Belt gear reducer, with steel base to fit 40 to 50 HP motor. The C. D. Jennings Grain Co., Hutchinson, Kansas.

**FOR SALE**—Eureka Dustless Receiving separator, 32½"x49½" screen; size 42" blower. Hughes Elevator, Box 231, Riverton, Wyo.

**FOR SALE**—Sturtevant Fan, model 70; 6 paddle type, 25" inlet and outlet; wt. 2000 lbs.; good condition; make best offer. Henry Field Seed & Nursery Co., Shenandoah, Iowa.

**FOR SALE**—One 32 Emerson Dockage Tester, with 110 ac motor, sieves and riddle. Like new. Two Globe Pneumatic Truck Dumps, one large, one small. Fruen Elevator, Beresford, S. D.

**FOR SALE**—1 No. 4 Gruendler ball bearing hammer mill with 1/16", 1/8", 3/16" and 1/4" screens. 1 No. 4½ Western corn sheller, reconditioned and guaranteed. Box 204, Kansas City 10, Mo.

**FOR SALE**—One 50 hp. 900 rpm. ball bearing Fairbanks-Morse motor; two Bauer Bros. 24" attrition mill direct connected to two 20 hp. motors, complete with starters, 220 volt, 3 phase, 60 cycle. Bargain for quick sale. D. E. Hughes Company, Hopkins, Mich.

**SCALES FOR SALE**

**FOR SALE**—Fairbanks 4 bushel automatic Scale. Ludell Equity Co-op. Exchange, Ludell, Kan.

**FOR SALE**—Two dormant scales in excellent condition. Fairbanks 2,850 lbs. capacity; Howe 3,200 lbs. capacity. Ronald Funk, Aberdeen, Idaho.

**MACHINES WANTED**

**WANTED**—Late model SS&S Gravity Clover Cleaner. Chance Seed Store, Connersville, Ind.

**WANTED**—Coal unloader, twenty-five or thirty ft. long, with gasoline power drive. Armacost Elevators, Campbellstown, Ohio.

**WANTED**—1 or 2 R24 Gruendler Hay Grinder; one ton Feed Mixer. White Sales Corporation, Scotts, Mich.

**WANTED**—We are in the market for your surplus equipment, such as Batch Mixers, Hammer Mills, Dryers, Filling Machines, Sifters, etc. What have you to offer? Loeb Equipment Supply Co., 910 N. Marshfield Ave., Chicago 22, Ill.

**WANTED**—250-300 hp. 220 v. Diesel generator; 100-150 hp. boiler; track scales; automatic scales and sewing machinery for bagging; steel conveyors and steel legs, small capacity; car puller and car unloading machinery for grain. Drawer K. Continental, Ohio.

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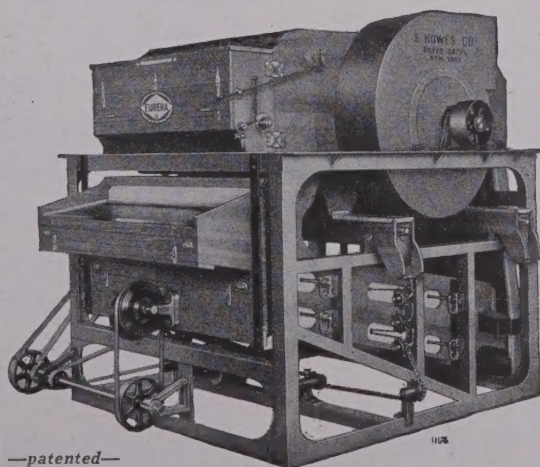
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is assured if you use Sidney Kwik-Mix Feed Mixers. These mixers are the result of expert engineering based on a sound knowledge of the needs and requirements of the grain-feed trade. Designed for hard useage yet not complicated; built of the best materials yet not costly. Ask for more information regarding these mixers as well as other equipment comprising

## The Sidney Line

for grain elevators and feed mills, which has been given preference by the trade for over fifty years.

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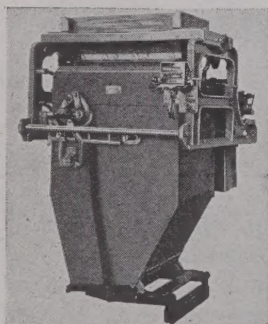
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Sidney, Ohio

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All of the operations listed below are essential in weighing grain. All are done efficiently—without use of manpower—by a

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Performs each of these acts mechanically:

1. Closing weigh hopper slide.
2. Opening bin gate.
3. Closing bin gate.
4. Balancing grain in scale.
5. Counting weights and reading beam.
6. Recording weights.
7. Opening scale hopper slide.
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Handled With Care**

Dust can be controlled. Engineering service is a part of Mill Mutual Insurance and our Dust Control Bulletins and Engineering Data are offered without obligation to the milling and grain trade.

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# GRAIN & FEED JOURNALS

INCORPORATED

327 S. La Salle St., Chicago 4, Ill., U. S. A.  
Charles S. Clark, Manager

A merger of  
GRAIN DEALERS JOURNAL  
Established 1898

AMERICAN ELEVATOR &  
GRAIN TRADE  
Established 1882

THE GRAIN WORLD  
Established 1928

PRICE CURRENT - GRAIN REPORTER  
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

SUBSCRIPTION RATES to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

To Foreign Countries, prepaid, one year, \$3.00.

THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO 4 ILL., MARCH 22, 1944

DAMP CORN which heats in transit often costs the venturesome shipper more than a modern drier installed.

GREAT improvement in the submarine situation should increase ocean trade between North and South America.

A PRODUCTION of 58 billion pounds of mixed feed in 1943 bears witness to the efficiency of our feed manufacturers.

STORING a truck in the driveway of a new popcorn elevator resulted in the destruction of both, but no charge was assessed for storage.

THE CEILING of 3.68 per 100 pounds of popcorn has so peeved Iowa growers, a surplus of over 30,000,000 pounds remains in cribs near Odebolt.

DO NOT let railroad agents induce you to load boxcars in excess of cars' stencilled capacity. Many connecting carriers, fearing trains may be wrecked, have refused to accept old overloaded cars. Transferring to cars equal to the load is most expensive.

CLOSING of corn processing plants at Kansas City, Mo., and Keokuk, Ia., must be charged up to the bureaucracy whose price policy has prevented sales of corn by growers.

OPERATORS of cob crushers seem to be finding a ready market for their product, so it may be this burdensome by-product of the cornfields will finally prove a source of revenue.

COUNTRY grain buyers can go to any expense necessary to move their own grain from farms to their elevators, but the OPA objects vigorously to their paying more than the ceiling price for grain, beans or flax.

WASHINGTON officials are beginning to hedge on the promise that the United States is going to feed the world after the war is over. A clear statement that America has not the foodstuffs to feed war-torn countries would avoid later bitter disillusionment.

BY THE time you have finished making much needed repairs to your elevator the new crop will be crowding your driveway for safe storage. While the CCC has many thousand distorted steel tanks for sale, experience with the Ever Normal Granary does not recommend their use for storing grain.

SO MANY old box cars are being pressed into service of the railroads every cautious grain shipper is taking particular pains to inspect each car offered him for loading and cooping all doubtful cars more thoroughly than ever. No profit in trying to reballast the entire line with your own grain.

A ST. LOUIS receiver having called attention of the O. P. A. to wheat growers in the river bottoms loading wheat into cars because no elevator or regular dealer is available, the O. P. A. has drawn up an amendment raising the producer's price 2 cents per bushel when he loads directly into car. If this is to be distorted into encouraging growers to go around the elevator operator the concession must be condemned, for the elevator operator needs volume to maintain cleaning machinery and weighing facilities.

LIQUIDATION of the Commodity Credit Corporation could be effected now at a loss to the government of \$500,000,000, the president of the agency told a committee of Congress; but losses on inventories of farm products now owned are not included, and they amount to \$903,490,000. Much of the loss has been sustained thru buying and selling grain in competition with regular grain dealers, who are taxpayers. All of the government's ventures into the marketing or storing of grain have resulted in loss, and yet the politicians persist in financing the promoters of wild schemes.

HEAVY OVERDRAFTS never have won the kindly consideration of receivers, brokers, or buyers. If you lack confidence in your present receivers, better change. The central market exchanges are not disposed to approve any but square dealing.

INVITING your local fire department to inspect your elevator on a bright clear day, when the wind is at rest, and explaining building's construction and arrangement as well as the mechanical equipment will promote the efficiency of the fire fighters, in case you have a fire, and may prevent your grain being soaked.

FILLING ball bearing boxes with bab-bitt is inexcusable at any time. The resulting friction can be depended upon to start a fire and may cause the destruction of another elevator. The world's need of food and modern grain handling facilities in time of war is so urgent, their secret exposure to any known fire hazard is unpardonable.

GRAIN DEALERS who plan on improving or enlarging their facilities for handling, grinding or storing grain, will help their contractor to get the needed materials and mechanical equipment by applying to the W.P.B. in advance and by persistently following up their application with letters and telegrams. While the supply of steel and wood is increasing, handlers and processors of grain are still experiencing some difficulty in obtaining all the materials needed.

DO YOU WANT to attend a conference of grain and feed dealers this year in hope of learning the wishes of the different officials of the Washington bureaus directing your business activities and the conviction of your fellow dealers, who are also anxious to learn the meaning of the latest order, then tell the secretary of your local association. A clear cut discussion of the Government's orders would help you to understand its objectives and make it easier for you to comply.

LARGE holdings of rye futures, not for its own use but as a hedge by a corporation broadly interested in food processing, point to a valuable service offered by the Board of Trade to merchants and manufacturers wise enough to avail themselves of it. Furthermore, this points to the need of early removal as soon as the progress of the war permits of the ceilings on other grains that hamper hedging transactions. This company's traditional policy is to keep its position balanced as a protection against sharp price advances and declines by investments in commodities. In other words, it strives to divorce speculation from its manufacturing business, leaving speculation to those who understand it and where it belongs—on the Board of Trade.



OUR READERS deeply appreciate the many grain trade news items sent us from all parts of the country and thank the members of the trade for their interesting contributions.

ADDITIONAL movement of cars, such as for light weighing is frowned upon by the O. D. T., but some discretion should be used in the case of grain warehousemen who do not have scales and must depend on track scale weights, loaded and empty, for settlements.

WINDING UP the affairs of the Farmers National Grain Corporation, as reported in another column, does not augur a similar fate for present day farmers co-operatives. Those that fell by the wayside, such as the Grain Marketing Co. and the Rural Grain Co., failed because fierce competition at terminal markets cut profits to the point where cheap government money and the exemption from then moderate taxes could not keep them afloat. Taxes have now become so heavy on private enterprise as to give tax exempt business an overwhelming advantage. For this reason one line company in the Northwest sold hundreds of elevators to the tax exempt concern.

CONGRESS seems disposed to extend the free admission of grains for feed for another ninety days, and today the Senate finance committee added "oats for food" to the favored list. If the committee had listened to the appeals of food economists, "wheat for food" also would have been included. Canada does not produce corn for export, so our corn imports continue to be a minus quality and the wet processors are forced to close because U. S. corn growers are unwilling to accept ceiling prices. No one in the trade should object to the exemption from duty of feed grains imported from Canada, since it enables private enterprise to import on the same basis as the government agency, the latter, however, still having the advantage of selling below cost at taxpayers' expense.

### Save Machines for U. S. Farmers

In Nebraska last week 170 farmers each wanted to buy one only tractor offered at an auction, and in compliance with the request for earnest money put up \$136,000, indicating how urgent is the need for farm tractors in the central west.

The wild plans to send 30,000 tractors abroad could well be dropped until our own farmers have the equipment needed to produce the food required by OUR navy, OUR army and OUR civilians, for the very sound reason that the means to produce should be in the hands of those who can make the maximum use of it.

Tractors on the broad acres of American farms certainly will operate more efficiently than on the ridiculously small plots farmed in European countries.

FARM STORED grain in Western Canada as well as in some sections of the U. S. A. is being inspected carefully by country buyers, who are amazed by the different insects infesting the grain, and the amount of damage traceable direct to green weed seeds, weevil, leaks and heating. Watching the quality of each load dumped may justify a discount that will save buyers from loss.

THE 10-CENT boost given soybeans to \$2.04 is displeasing to the growers who had asked a support price of \$2.25 per bushel. It is significant that farmers have reported to the Department of Agriculture their intention to plant a reduced acreage of this greatly needed war material. The autocrat needs but the stroke of the pen to set a low price, but it takes dollars to set the plow in motion.

### The Changing Grain Trade

The difficulty of filling out long questionnaires and frequent reports for Washington bureaucrats, combined with the shortage of manpower, is causing many successful grain merchants of long experience to throw up the sponge in disgust. That fully explains why so many modern grain elevators, located in choice grain territory, have been sold at sacrifice prices recently.

The growth in the number and volume of side lines has forced the grain dealer to study merchandising, business policies, and collection practices. In the early days, the grain merchant was only a buyer and his large sign always announced, CASH FOR GRAIN. His predecessor was not even a buyer of grain, he traded for any products the farmer had to offer: he lived by barter.

In the closing days of the last century many stations had several large elevators specializing in the shipping of grain, but the overbuilding of railroads cut up the surplus grain territory and provided attractive sites for new elevators, but did not increase the volume of grain to be transported, so burned elevators have not been rebuilt, competing firms have been consolidated and many lines of railroad have been junked.

Improved highways and the general adoption of combines, large trucks, and 100,000 cap cars, have expedited and facilitated the movement of each crop to market, leaving the country grain elevator operator with a lot of spare time on his hands, so he has turned to side lines and feed grinding and mixing with most satisfactory results.

Today, most elevators with sidelines are busy every day of the year, and even though they are large borrowers at the bank, they turn over their operating capital so many times each year they accumulate sufficient funds to pay interest and keep something for themselves. The grain buyer of 1875 has become a real

merchant and a thoro believer in the Right of Private Enterprise.

### Growers May Be Paid Above Ceiling Price by Patronage Dividends

It is good news for co-operative companies that in Supplementary Order No. 84 the Office of Price Administration has placed the seal of its approval on the payment of patronage dividends to members and non-members, altho this payment results in the producers receiving more than the ceiling price they would realize by selling to non-co-operative distributors.

It is provided that this privilege is accorded to associations that do not pay patronage dividends except at the end of the association's fiscal year or at the end of intervals of not less than six months where the books of the association are regularly closed at the end of such intervals.

Ordinarily the manager of a co-operative grain elevator has the choice of paying the dividend by a higher price when the wagon is unloaded, or paying it as a patronage dividend at the end of the fiscal year. The cailing deprives him of the choice first mentioned. The profits then must be disposed of either by a patronage dividend or a dividend on stock.

The dividend on stock is permitted by Order No. 84, by the use of the word "otherwise" in paragraph (b).

### Set Aside Part of Country Elevator Corn Receipts?

The conference of trade representatives with government agencies at Washington Mar. 16 to consider how to get corn to processors making products needed in the war effort, had no immediate result.

The seriousness of the situation had been explained to Congress by P. R. O'Brien, pres. of the Chicago Board of Trade; and W. Y. Elliott, director of the W.P.B. division of stockpiling and transportation, also had pointed out the salient facts long ago in a report in which he said:

"This is the result of government price support of hogs, ceiling prices on commercial corn and the War Food Administration's unwillingness to rescind a government promise to farmers at a politically inopportune time.

"The consumption of feed by hogs results in a shortage of all feed grains, a maldistribution in transportation and a shortage in the basic raw materials necessary to war production. It is having repercussions on alcohol, leather, starches for industrial use, explosives, rubber, batteries, textiles and pharmaceuticals."

Of the several suggestions made at the conference the proposal to set aside a percentage of the corn received at country elevators for the processors seemed to meet with most favor. The set-aside may be 25 or 35 per cent.

It is reported that the W.F.A. and O.P.A. were adamant in their opposition to raising the corn ceiling.

If the set-aside should fail to provide sufficient corn for processors after a short period of trial, which is possible, owing to light movement from the farms at planting time, the alternative is to requisition corn in cribs of the growers.



## Limit on Country Shipper's Soybean Stock

A country shipper cannot hold for his own account more than 2,000 bus. of soybeans, under Paragraph (d) of Order 6, as follows:

"(d) *Limitation on country shipper's inventory of soybeans.* No country shipper shall have on hand at any time after Mar. 31, 1944, a quantity of soybeans of the 1943 crop exceeding the quantity for which he has contracts to sell to processors, manufacturers, seed dealers and Commodity Credit Corporation but which he has not yet delivered, plus the greater of (1) the quantity of soybeans of the 1943 crop purchased by him during the immediate preceding 30 days or (2) 2,000 bus. of such soybeans."

## Washington News

The agriculture subcommittee has offered the House a bill to abolish the Farm Security Administration.

The House has approved the bill providing for 90-day extension of suspension of import duties on feed grains. The senate will hold short hearings.

The War Food Administration has authorized a continuance thru June 30, 1944, of the suspension of restrictions on delivery of crude cottonseed, peanut, soybean and corn oils to refiners for refining.

Rep. Kleberg of Texas has introduced a bill reorganizing the price control and permitting an annual rise of up to 12 per cent each year, stating that the O.P.A. is causing a paralysis of production.

Senator Thomas of Oklahoma introduced a bill Mar. 16 to change the basis for parity from 1909-14 to 1919-29, when prices were relatively higher. Passage of the bill would raise the government loan values.

The C.C.C. is offering merchandisers a contract under which they may purchase C.C.C. wheat storage receipts, distributing to A, B, C or D certificate holders at the same margin being allowed warehousemen.

The W.F.A. said Mar. 20 that it would continue to purchase beans of the 1943 crop and sell them for civilian consumption, at ceiling prices. The W.F.A. takes a loss of 70 cents per 100 lbs.

Holders of certificates of allocation of feed wheat must exercise their option and purchase the wheat by the 25th of the month. New certificates will be mailed after the 25th. On account of the late start the March certificates will be extended beyond Mar. 25.

An increase in maximum prices for yellow and white dry corn milling products was announced Mar. 20 and effective immediately by the Office of Price Administration to take care of recent increases in corn prices, so that millers can continue to produce. The new maximum base point prices for Kansas City are: for yellow corn products \$2.77 a hundred pounds; for white corn products, \$3.21 a hundred pounds. This is an increase of 40 cents a hundred pounds at processor levels.—Amendment 9 to M.P.R. 305.

## Officers Pacific N-W Feed Ass'n

At its recent annual meeting at Seattle the Pacific Northwest Feed Ass'n elected the following officers: pres., Dwight Howell, manager for the General Mills at Tacoma; vice pres., Al Pynor, Bellingham; sec'y-treas., Art Hill, Seattle, and manager, re-elected, Jas. McCormack.

## Shippers Oppose Sending Cars to Canada

Shippers identified with the grain, milling and distilling interests of Ohio, Indiana and Kentucky, meeting in the Louisville Board of Trade, adopted a resolution offered by Freeman Bradford, manager of the Indianapolis Board of Trade against diversion of American "freight cars for return loading of wheat from Canada when there is greater demand for equipment within the United States. . . ."

Jas. P. Haynes, manager of the transportation department of the Louisville Board of Trade, and local representative of the Interstate Commerce Commission, said it was necessary to obtain maximum use of all grain cars because of a large number being sent to Canada for wheat to supply the Southeast and the Carolina areas for stock feeding requirements.—P. J. P.

## Service Men Guaranteed Jobs Back Upon Return

By A. W. WILLIAMS

A federal law that many employers are not conversant with, but which will cause many headaches, is that guaranteeing service men their jobs when they return to civil life.

On Feb. 28, Judge Mac Swinford, Eastern Kentucky district Federal Court, at Lexington, Ky., ruled the act constitutional, and described the law as a significant force in the maintenance of morale of our armed forces.

The ruling was made in the case of Robert E. Hall, Newport, Ky., vs. Union Light & Power Co., Covington, Ky. Hall entered service by enlistment April 25, 1942, received an honorable discharge, June 4, 1942, and claimed he requested reinstatement in June, and was not reinstated until September, and brought suit for \$512 that he would have earned if the company had complied with the law.

The company did not contest the facts, but held that the law was unconstitutional and so worded as to deprive the company of its rights, and also contended that the Federal district court did not have jurisdiction.

Judge Swinford while admitting that the law might be worded vaguely held that it could be reasonably understood by reasonable people, and that to strike down the act, of the Legislative Branch of the Government because it employs more or less indefinite terms, that may have a negative meaning, would still be an unwarranted usurpation of the legislative function providing for the common defense. He therefore overruled company contentions and found for the plaintiff.

## Storage Ticket Held Valid

The U. S. Circuit Court of Appeals at Bismarck, N. D., recently gave the First National Bank of Dickinson judgment against F. H. Peavey & Co. on a storage ticket for 3,960 bus. of wheat that had been fraudulently issued by M. Mossbrucker, agent for the firm's subsidiary, the Monarch Elevator Co.

A blank form of the Monarch Elevator Co. was used in drawing up the receipt, made out to Theodore Houser, who turned the ticket over to the Dickinson Bank. The defense of Peavey & Co. was that the ticket was not valid.—P. J. P.

## Receivership of Farmers National Grain Corp.

Judge Leahy of the U. S. District Court for Delaware in the suit by the Iowa Co-operative Grain Co. against the Farmers National Grain Corporation, wherein Eugene Curtis was appointed receiver, made allowances to the receiver and his attorney of \$27,000 additional for services performed.

The Court said: "Defendant, Farmers National Grain Corporation, was a Delaware corporation. At one time it marketed 267,600,000 bus. of grain in one year, the value of grain marketed annually varied from \$75,215,000 to \$134,678,000. It qualified in 27 states and had about 50 branch offices. It employed five hundred persons. Administration expenses varied from \$1,236,000 per year to \$2,043,000. It operated 243 terminal elevators.

"The government, thru Farm Credit Administration, lent defendant some \$14,000,000. In connection with a compromise settlement in 1936, defendant transferred all of its assets to the government in part payment of the loan. At that time F.C.A. advanced an additional \$2,000,000 to defendant's stockholders who transferred this sum to defendant for working capital. F.C.A. took the stockholders' notes and their individual stock holdings, thus receiving practically all of defendant's outstanding shares on pledge as security for the \$2,000,000 loan.

"To date (July 30, 1943), F.C.A. has realized approximately \$12,000,000 on the original \$14,000,000 debt. On June 1, 1938, defendant dissolved under Delaware statutory law. Its directors appointed Curtis as their attorney in fact and liquidation agent to wind up the corporate affairs. By resolution the board agreed to pay Curtis \$20 per diem plus expenses for services as liquidation agent. From then on the directors seemed to have faded from the picture and Curtis carried on alone."

June 20, 1941, Judge Mields appointed Curtis temporary receiver and on Oct. 24 he was made permanent receiver.

On the basis of the court orders Curtis paid to himself \$11,225. He had obtained the services of Jas. H. Wheat of the Illinois bar. Wheat was allowed \$10,000 by the court. His claim for compensation rested on \$50 a day.

The winding up and liquidation was now complete and there remained in the receivership estate \$111,977.20. Thereafter both Curtis and Wheat made a request for further allowances. Curtis wanted \$33,995 additional and Wheat asked for \$31,300. The expenses of the receivership, exclusive of receiver's and counsel's fees, amounted to \$70,000 and this had been paid. All creditors have been paid and approximately \$520,000 has been distributed to stockholders, this going over to the F.C.A. as part payment on the \$2,000,000 loan.

The F.C.A. is the only one having any claim to the \$111,977.20; and it objected to any further allowances to the receiver and his counsel. The Delaware court cut down the claims to \$15,000 for Curtis and \$12,500 to Wheat. Jas. R. Morford, lawyer, of Delaware, claimed \$5,000 and was allowed \$3,600 plus \$104.46 expenses, and that is the last of the F.N.G.C.—51 *Federal Supplement* 134.

**H**APPY the man who can endure the highest and lowest fortune. He who has endured such vicissitudes with equanimity has deprived misfortune of its power.

—Seneca



# Asked—Answered

[Readers desiring trade information should send query for free publication here. The experience of brother dealers is most helpful. Replies to queries are solicited.]

## Controlling Insect Pests?

**Grain & Feed Journals:** We contemplate the installation of a plant for processing wheat, soybeans and rice, and in our pilot plant have had a certain amount of difficulty with insect infestation. What are the standard methods of controlling this sort of thing?—Ernest P. Tibbets, chemical engineer, Bristol-Meyers Co., Hillside, N. J.

**Ans.:** Weevilfume mentioned in last number in reply to this question is for use on the farm. Weevilcide is specially made for use in the bins of grain elevators and has a large sale to wholesale grain handlers.

## Application of Wage and Hour Law?

**Grain & Feed Journals:** We operate a country elevator (employing 5 and 6 men) receive and store wheat for the local farmers. We also operate a chopping mill and mixing outfit. We make some feeds which we retail locally (none out of the state) these feeds are registered.

The mill and mixer is used a greater part of the time in grinding farmer grains and mixing with it other ingredients which they purchase from us.

The bulk of the wheat is shipped south across the state line as it is purchased by us. The volume of these wheat sales is about 28% of our total sales.

It has been customary for us to work 60 hrs. per week. A number of times during the last several years we have raised the wages of the men to try to be in line with what they might have earned if they had been employed elsewhere. The arrangement with the men being that they would be paid a certain amount for 260 hrs. If they worked more hours than that they would be paid more on the same basis but if they took time off it would be deducted on that basis. They have the privilege of working the 260 hours if they are so minded.

It is argued by some that because our wheat shipments are wholesale and total more than 25% of our volume that we are obliged to pay time and a half for all time over 40 hours per week to men who do anything to a car that has or will move across the state line. This would apply to feeds coming in as well as wheat going out.

If this is true can we change our wage scale so that the straight time plus the time and a half would about equal what we now pay for a month? This was a suggestion from the men.—Jones Grain Co.

**Ans.:** Country grain elevators are exempt from the wage and hour law. Ever since the regulation went into effect Apr. 1, 1941, employees engaged in establishments employing ten or fewer employees in the exempt operations and drawing the commodities from farms in the general vicinity are exempt.

In the Fair Labor Standards Act (Wage and Hour Law) employees "employed within the area of production (as defined by the administrator)" are exempt from the hours provisions of the Act under Section 7(c) and from both the minimum wage and maximum hours provisions under Section 13(a)(10) in the processing of certain specified agricultural commodities.

This new regulation superseded the previous regulation which defined the area of production by limiting it to establishments in towns of less than 2,500, receiving from farms within 10 miles and having not more than 7 employees in the exempt operations.

For every 1,000 employed in manufacturing during January, 46 quit their jobs, seven were discharged, five left to enter the armed services, eight were laid off, one left for miscellaneous reasons and 64 were hired.

## Farmers Not Selling Wheat to Government

The Commodity Credit Corporation states that up to now no wheat has been sold to the agency by farmers under the plan to buy wheat and store in government owned wooden and steel bins. It is understood that the offer will continue to stand.

Early in February it was announced that no grain containing over 14% moisture would be eligible at the announced prices, which were to be slightly under the ceiling.

Regulations also provided that producers would have to take grade discounts and would be paid no premiums for protein content.

## Non-Profit Firms to File Returns

The new U. S. Revenue Act requires non-profit organizations to file returns showing the source of their income and how it was spent. Forms for this are not yet available, and the filing date has not yet been announced, but it will probably be around May 15. The first return will cover the business year of 1943, and the new law requires a similar return to be filed for each succeeding year.

Organizations affected by this new law will include boards of trade, chambers of commerce, trade associations, co-operative organizations, labor unions, etc., that heretofore have not been required to file returns. Supporters of the law contend that this new order will require all tax-exempt organizations to show whether they made any donations to political campaigns and if so how much. It will also reveal to Congress and the public the inside workings of the labor unions, bringing out many details of financing, salaries and political contributions which before have not been made public.

## C.C.C. Corn Loans

Commodity Credit Corporation through March 11, 1944, had completed 5,771 loans on 6,507,186 bus. of 1943 corn in the amount of \$5,484,897.79. The average amount advanced was 84 cents per bushel. On March 11, 1943, 44,183 loans had been completed on 52,029,809 bus. in the amount of \$40,225,307.64. Loans by States follow:

States of Origin	No. of Loans	Farm-Stored (bus.)	Amount Advanced
Illinois .....	614	797,496	\$ 797,552.14
Indiana .....	66	59,669	54,288.56
Iowa .....	3,467	3,948,797	3,301,592.49
Kansas .....	21	18,018	15,371.70
Kentucky .....	3	11,780	11,308.80
Minnesota .....	330	300,167	250,741.29
Missouri .....	192	196,742	169,104.89
Nebraska .....	905	1,012,238	840,300.05
Ohio .....	25	15,743	14,906.32
South Dakota .....	148	146,536	119,731.55
Total .....	5,771	6,507,186	\$5,484,897.79

Combined Farm and Warehouse Loans Outstanding on Other 1943 Loan Programs:

	Loans	Quantity	Amount
Barley .....	566	479,200 bus.	\$ 351,856.76
Flaxseed .....	1,915	527,189 bus.	1,400,910.19
Grain			
Sorghums ..	17	27,346 bus.	23,103.57
Soybeans ..	458	222,164 bus.	408,235.75
Rye .....	128	81,213 bus.	61,019.36
Dry Edible Beans .....	10	201,989 lbs.	10,652.56
Dry Edible Peas .....	56	2,248,711 lbs.	97,246.45
Hay & Pasture Seed .....	94	173,643 lbs.	19,654.35

## C.C.C. Wheat Loans

Commodity Credit Corporation through March 11, 1944, had completed 121,161 loans on 129,638,890 bus. of 1943 wheat in the amount of \$161,742,752.43. The wheat loans made include 45,170,629 bus. stored on farms and 84,468,261 bus. stored in warehouses. The average amount advanced was \$1.248 per bushel, which includes some transportation charges from the area of production to warehouse locations. Liquidations to date amounted to 79,416,061 bus. of which 13,316,734 bus. were stored on farms and 66,099,327 bus. stored in warehouses.

On March 11, 1943, 533,232 loans had been completed on 405,501,606 bus. in the amount of \$458,262,794.65. Loans by states follow:

States of Origin	Loans Completed Number	Loans Bushels	Liquidations (bushels)
Arkansas .....	2	3,463	.....
California .....	43	362,150	177,961
Colorado .....	2,469	4,336,139	3,155,816
Delaware .....	456	165,900	125,871
Idaho .....	992	1,987,422	746,711
Illinois .....	340	127,936	66,703
Indiana .....	90	44,244	20,730
Iowa .....	435	230,966	155,273
Kansas .....	23,626	23,318,005	18,064,317
Kentucky .....	91	45,778	23,289
Maryland .....	1,405	461,024	308,152
Michigan .....	26	5,718	1,661
Minnesota .....	5,988	3,195,298	2,062,266
Missouri .....	375	135,104	118,447
Montana .....	6,716	12,623,137	5,304,175
Nebraska .....	11,537	9,756,122	5,772,229
New Jersey .....	35	11,284	5,965
New Mexico .....	299	549,878	416,803
North Carolina .....	5	756	756
North Dakota .....	30,546	30,275,137	16,804,965
Ohio .....	264	60,897	35,493
Oklahoma .....	10,291	7,117,502	5,444,075
Oregon .....	1,896	6,110,560	2,636,234
Pennsylvania .....	446	115,348	48,232
South Dakota .....	8,554	4,814,103	2,602,118
Tennessee .....	284	77,380	32,343
Texas .....	9,993	12,769,722	10,433,437
Utah .....	104	218,114	127,812
Virginia .....	118	36,013	15,045
Washington .....	3,094	9,688,729	4,384,240
Wyoming .....	636	995,061	336,942
Total .....	121,161	129,638,890	79,416,061

The Canadian carryover of wheat is expected to exceed 400,000,000 bus. July 1, according to the Dominion Bureau of Statistics. The U. S. carryover may fall to 250,000,000 bus.

## Coming Conventions

Trade conventions are always worth while as they afford live, progressive grain dealers a chance to meet other merchants from the same line of business under favorable conditions. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Mar. 24. Midwestern Feed Mixers Ass'n, Pere Marquette Hotel, Peoria, Ill.

April 21, 22. California Hay, Grain & Feed Dealers Ass'n, Hotel Californian, Fresno, Calif.

May 3. American Corn Millers Federation, Edgewater Hotel, Chicago, Ill.

May 11. Kansas Grain, Feed & Seed Dealers Ass'n, Hutchinson, Kan.

May 11, 12. Illinois Grain Dealers Ass'n, Peoria, Ill.

May 15. Missouri Grain, Feed & Millers Ass'n, Statler Hotel, St. Louis, Mo.

May 18, 19. American Feed Manufacturers Ass'n, Drake Hotel, Chicago, Ill.

May 23, 24, 25. American Ass'n of Cereal Chemists, Nicollet Hotel, Minneapolis, Minn.

May 30, 31, June 1. Pacific States Seedsmen Ass'n, Multnomah Hotel, Portland, Ore.

June 7, 8. Ohio Grain, Mill & Feed Dealers Ass'n, Deshler-Wallick Hotel, Columbus, O.

June 14, 15, 16. Southern Seedsmen Ass'n, Memphis, Tenn.

June 15, 16, 17. Society of Grain Elevator Superintendents, Medinah Club, Chicago, Ill.

June 19, 20. American Seed Trade Ass'n, Palmer House, Chicago, Ill.



## Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reform or improvements. Dealers having anything to say of interest to members of the grain trade are urged to send it to the Journals for publication.]

### Dealers Should Have 10 Cts. for Handling Beans

*Grain & Feed Journals:* There are not many soybeans left in the farmer's hands as the government policy in announcing approximately 20c raise for next year has frozen what little stocks remain in growers' hands. Farmers don't need the money and they can keep the beans until the next crop, of course, we know that the beans and the oil and feed they produce are needed but they seem to be liberal in increasing the price of this commodity.

Many of our farms will raise 35 bus. of soybeans to the acre, and at \$2.00 per bushel they don't need to raise much else on their farms. At the same time the C.C.C. wants to hold the country elevator down to five cents per bushel for handling this high priced commodity. We believe the trade should make a firm stand this year and demand at least 10c per bushel. If we don't do this we'll wake up some day and learn that they are allowing us less than cost to handle corn, oats, wheat, and other commodities. Perhaps that's what they're driving at as they're loaning the Farm Bureau plenty of money to buy the country elevators that just can't make it any longer.—Goodrich Bros. Co., by C. C. Barnes, Winchester, Ind.

### A Big Load Gets Thru Without Transfer

*Grain Dealers Journal:* The railroads are requiring all shippers to load all cars to the maximum.

Here is one that was loaded to maximum and went thru to destination, back to the east coast without transferring. This is one the railroads were so busy last fall, they weren't taking railroads weights on the cars. This is UP 193035, car of No. 1 yellow milo, shipped from Smyer, Texas, by the Plemons Gin. The outturn weight was 140,420 lbs.—Transit Grain & Commission Co., Julian Scott, Fort Worth, Tex.

### An Improved California Feed Plant

The rapid growth of the feed grinding and mixing business of the Golden State is keeping pace with the marvellous increase in the feeding of flocks of poultry and herds of milk producers. One of the latest improvements in this line is found at Dixon, Calif., a village in Solano county on the main line of the Southern Pacific R.R. near Sacramento, the capital of the state.

The new reinforced concrete elevator has storage room for over 40,000 bags, and ground has been acquired for building an addition of similar capacity.

The workhouse contains a Hess Drier, a Eureka Cleaner, a Richardson Automatic Scale, two elevator legs, screw conveyors above and below the storage bins, a power shovel for unloading bulk grain from cars and a modern truck dump. The observation tower on top of the bin farthest from the workhouse is for the special use of the air warden looking for Jap planes.

In addition to carrying a full line of ingredients the California Mealalfa Co., successor to the Dixon Milling Co., cleans, grinds, dries and rolls all kinds of grain for dairy operators and poultry farmers.

The company of which W. J. Weyand is owner and manager, also grows large fields of alfalfa and mills both sun-cured and dehydrated alfalfa. It operates its own Ardrier plant and mixes meals and molasses. Ralph J. Weyand is sales manager for the plant illustrated on our outside front page.

### Soybean Meeting March 28

Grain commission merchants, other interested groups and individuals in the trade are invited to a meeting scheduled by the Commodity Credit Corporation at the Morrison Hotel, Chicago, 10 a. m., Mar. 28 to consider tentative regulations for the 1944 soybean purchase program.

One point that may be brought out by shippers is the excessively wide discount in the 1943 regulations between numerical grades, the trade preferring single factor discounts.

### Application Required for Allotment of Lumber

The War Production Board is planning a new order setting up procedures under which the delivery of lumber will be authorized.

All major consumers of lumber must file applications before Apr. 25 for second and third quarter requirements. The application order affects consumers who used more than 50,000 board feet during the final quarter of 1943 or who expect to use more than that amount during either the second or third quarter of 1944.

Construction jobs are exempt when specifically authorized by federal agencies, when the authorization does not require W.P.B. permission for construction.

### Pacific N-W Wheat Discounts

Effective Mar. 15 and until June 30 the Seattle Grain Exchange has adopted differentials and discounts that will govern all trading in wheat in Pacific Northwest markets.

The same schedule has been adopted by the Portland Grain Exchange, and has been approved by a committee of the Pacific Northwest Grain Dealers Ass'n.

Important changes are:

1. Discounts for admixture (both export and milling wheats).
2. Change of grade on Northern Spring and Dark Northern Spring wheat from No. 1, 58 lbs. to No. 1, Heavy, 60 lbs.
3. Discounts on damaged kernels or foreign material, and M.E.O.G.
4. Discounts on smutty wheat.

The differentials take note of test weight, moisture content, damaged kernels, foreign material, and admixtures of different classes of wheat.

**Lake Charles, La.**—The Office of Price Administration rough rice ceilings, effective Apr. 15, brought from S. Arthur Knapp, rice land irrigation company executive, a vigorous protest against the "unfairness of fixing rough prices in the middle of the planting season." He foresees some decreased production this year as a result of the imposition of these ceilings and a big drop next year. Knapp pointed out that differentials covering moisture content will make "rice marketing more complicated than filling out an income tax blank."—J. H. G.

### Progress in Moisture Testing

By P. W. BURROWS, Before the Society of Grain Elevator Superintendents

There is a great misunderstanding regarding what is the official method for making moisture tests.

The official grain standards of the United States specify that the air oven method is used on all grains except corn and soybeans, for which the water oven method is used. All other types of testers in common use by the grain trade, such as the Brown-Duvel, the Tag-Heppenstall Moisture Meter, and the Steinlite are calibrated methods.

The U.S.D.A. realizes that it is impractical for the grain trade to use the air or water oven methods, which take anywhere from one hour up to 96 hours, and states: "In order that rapid determinations of moisture in grain may be made to meet the routine requirements of practical inspection work, grain inspectors may use electric moisture meters or other apparatus and methods which give moisture test results equivalent to the results obtained with the air oven method or the water oven method, as the case may be."

The Brown-Duvel moisture tester, which works on a distillation principle, was known as early as 1902, but did not come into general use until after the Grain Standards Act went into effect. In 1926 an extensive study by Coleman and Boerner, indicates that unless this type of tester is carefully handled inaccurate results will be obtained. The thermometer must be correctly inserted into the oil, the shut-off point must be followed exactly, priming tests must be run if the tester has not been in use for 24 hours, the sample must be weighed out carefully, stoppers must not become soggy, graduates must be thoroly dried, tester should be standardized for length of time in running the test, voltage of the heating plate must be correct, etc. If the above factors are not watched carefully, variations from .2 to 1½% will result. The Brown-Duvel tester, altho still being used by a considerable number of firms, is now being replaced by the faster electric type of testers.

**ELECTRICAL METHODS.**—Generally speaking, there are two types of electrical moisture testing methods in use by the grain trade. One is the conductivity method and the other is the tester which operates on a radio frequency impedance principle. The Tag-Heppenstall moisture meter, which works on the conductivity method, came into use in 1930.

The U. S. Department of Agriculture was anxious to get a faster tester to replace the Brown-Duvel in the various inspection offices and worked with the manufacturer of the Tag meter in making calibrations. At that time there was no other type of electrical tester manufactured, and it is interesting to note that Tag-Heppenstall Moisture Meter was originally designed for testing tobacco and other products.

The basic theory of the conductivity method is that the electrical resistance of the material decreases as the moisture content increases. For example, the resistance of 13% wheat is 7 times that of 14% or 50 times that of 15% wheat. The Tag meter is fast, easy to operate and is easily standardized. It must be used with great caution on grain of mixed moisture content or kiln dried grain.

The Steinlite tester, another popular electric tester, operates on the theory that the radio frequency impedance varies directly with the moisture content of the grain, which was known as far back as 1930, but the Steinlite did not come into use until about 1938. This instrument is calibrated against the official oven method, same as the Brown-Duvel and Tag meter. With it, it is possible to make moisture tests on both large and small grain rolls without changing rolls, etc. It is also fast and guaranteed to be accurate when compared to the official oven methods. It has no moving parts to replace, and the manufacturer has a good service program.



# Electronics in Grain Conditioning

BY GROVER C. MEYER, Industrial Engineer of Kansas City Power & Light Co., before Minneapolis Chapter, Society of Grain Elevator Superintendents.

**SUMMARY.**—The distillation method (Brown-Duvel) is rapidly passing out of existence because it is too slow for the grain trade. The electrical testers do give accurate results compared to the official oven methods, but like all instruments, should be used with care. They will not give an accurate test on frozen grain, and cold grains present a definite problem. They also tend to become less accurate on high moisture grain.

It should be noted that it is impossible to get various types of oven methods to agree 100% of the time, and there appears to be a definite need for a very accurate basic method or standard "yardstick" against which the electrical methods can be calibrated.

## Hemp Support Prices

American hemp produced under contracts with the War Food Administration will be supported at \$30 to \$50 per ton for designated classes of hemp straw. It is expected that the total acreage planted will be about 60,000 acres as compared with 170,000 in 1943. Contracts will be entered into with growers providing for the planting of specified acreages. Producers will be supplied with seed and certain equipment and labor in connection with the harvesting of the crop, the cost of such seed, equipment and labor to be paid for by deduction from the purchase price of the hemp straw when delivered. The signing of contracts with producers began on Feb. 1, 1944, but the harvesting and purchasing of hemp straw will begin about Oct. 15, 1944.

## Scale Men in Annual Meeting

The National Scale Men's Ass'n at its annual meeting Mar. 13 and 14 at the Hotel Sherman, Chicago, elected H. H. Russell, of the National Bureau of Standards, Washington, pres.; Chas. Bauer, Gary, Ind., vice pres., and Harry M. Roeser, Chicago, sec'y-treas.

J. A. Schmitz, Chicago Board of Trade weighmaster, spoke on "What Is the N.S.M.A. Picture in 1954?" forecasting the future progress of the Ass'n by its achievements in the past.

David Lundeen, supervisor of the track and hopper scale department of the Minnesota Railroad & Warehouse Commission, in an able address on "The America of To-morrow," said: "The men and women in our armed forces do not want to come home from the battlefields in the deserts and jungles to find their America regimented, strangled and goose-stepping to the orders of irresponsible bureaucrats."

F. J. Heaslip of Fairbanks, Morse & Co., spoke on "Scales, Yesterday, Today, Tomorrow."

## Wheat Ceiling Amended

Effective Mar. 24 the O.P.A. has amended M.P.R. 487, wheat, changing sec. 3 defining area A, making changes in the Oregon and Washington area to exclude several counties that are deficit areas, setting up a formula price for Atlanta, Ga.

As originally written, RMPR No. 487 set up a terminal price for hard wheat at Atlanta, Ga., on a basis of the Kansas City and St. Louis price plus freight. This raised the hard wheat level in the area adjacent to Enid, Okla., by 2½¢ per bu. over the proper relationship of Enid to the price at the Gulf. It was determined that the hard wheat price at Atlanta should be based on Oklahoma origin costs plus freight, rather than on a basis of Kansas City and St. Louis plus freight. Accordingly, the hard wheat price at Atlanta is being reduced 2½¢ per bu.

The "formula price" for mixed wheat is changed to include mixtures of red durum wheat that should bring values in line with values of red durum wheat and with the actual milling values of these mixtures. The previous formula price for mixed wheat was not the proper basis for mixed wheat containing mixtures of red durum.

The "formula price" for mixed grain is changed to cover mixtures containing both less than 50% of wheat and mixtures containing more than 50% of wheat. Previously, the regulation had applied only to mixtures containing more than 50% of wheat.

The purpose of this paper is to present in a non-mathematical way, an explanation of electronics as applied to one phase of the grain industry.

I have chosen for this explanation, a method of insect control by induction heating. However, before a clear idea may be had of the working of this method, it will be necessary to explain the principle upon which this method is based, known as the "electron theory." This explanation will begin with the constitution of matter which can simply be defined as any tangible substance that has weight and dimensions, and considering further that all matter is composed of molecules, the smallest known physical division of matter. Molecules in turn are made up of atoms, which are the smallest divisions of an element. For example, a molecule of water consists of two atoms of hydrogen and one atom of oxygen.

THE "ELECTRON THEORY" now has to do with the structure of the atom, which is pictured by scientists as a small dense core about which one or more electrons revolve in much the same manner as the planets revolve around the sun, the electron being represented by the planets and the core by the sun. The name given to the core, or the nucleus, of the atom is the proton, and together with its counterpart, or mate, the electron, goes to make up the atom.

The atom is said to be electrically neutral consisting of equal positive and negative charges of electricity, the proton being the positive charge, and the electron, the negative charge. Hence the normal atom is in a neutralized state. Atoms contain protons and electrons in equal numbers and differ only in the number of electrons and protons that they contain.

For example, a hydrogen atom consists of one electron and one proton; a helium atom contains two protons and two electrons; a carbon atom contains six protons and six electrons. Every atom contains an equal number of electrons and protons, but it is possible to remove electrons from an atom or to add electrons to it. A body which contains more than the normal electrons, is said to be negatively charged, as the electrons are negative charges of electricity. A body having fewer than the normal number of electrons is said to be positively charged. In practice this charging is brought about for example by rubbing a glass rod with a piece of silk. The silk will rub off some of the electrons from the glass leaving the glass positively charged and the silk negatively charged.

Although an atom may contain any number of electrons from one, in the case of hydrogen, to 92 in the case of uranium, and although a body contains a larger number of atoms, it is very seldom, if ever, that more than one electron can be removed from each atom. You will see that when electrons are removed from a body, the greater the removal, the more difficult it becomes to remove them because of the increasing attraction by the protons as the electrons are removed.

So far we have only shown how an electron can be removed from a body by friction, which phenomena is commonly known as static. Electrons can be set in a continuous stream by the application of an electrical pressure called voltage. And a normal stream of electrons constitutes an electric current. To produce currents in the order of magnitude met with in engineering practice, it requires the flow of billions and billions of electrons per second.

For example, the current flowing in the filament of an ordinary 60 Watt lamp is about  $10^{10}$  or 1 followed by nineteen zeros, electrons per second. It has frequently been stated that electricity has a velocity of 186,000 miles per second. This does not mean that the electrons

flow at that speed, it merely means that if an electrical pressure is applied at one end of a copper conductor, which is 186,000 miles long, the electrons will begin to come out at the other end one second later. In other words, the pressure wave and not the electrons travel at the rate of 186,000 miles per second.

The electrons are already in the atoms of copper of which the conductor is composed, and requires some external force for their movement. Electrons can only be moved through a conductor by the aid of an electrical pressure. At this point, it might be well to give a mechanical analogy of what is meant by "pressure wave."

There are none of us but what at some time have experienced the starting of a train of freight cars by a locomotive. And in starting the train of cars, it is necessary that the slack be taken up at each car coupling, and while the locomotive might be moving forward at the rate of only one mile per hour, the travel of the pull, or take up, will travel much faster than one mile per hour. The pull of the locomotive representing the pressure wave and the cars of the train representing the electrons.

Normally, with the transmission of an electric current, we deal with conductors and insulators, and as both of these items constitute matter, the atoms of which they are composed, contain electrons and protons. An insulator is a material that offers a very high resistance to the passage of an electric current, or the movement of its electrons. A conductor is a material that offers a comparatively low resistance to the passage of an electric current, or the moving of its electrons.

A perfect insulator would offer an infinite resistance to the passage of an electric current. No perfect insulator is known in engineering practice. The best insulators such as air, glass, mica, porcelain, rubber, oil and varnish have an electrical resistance at room temperature, millions of times that of copper or aluminum. There is no sharp distinction between insulators and conductors, if the electric pressure is raised high enough, the so-called insulator becomes a conductor.

Summing up what has been said regarding insulators and conductors, they differ only in the pressures required to move the electrons. All materials remain insulators as long as the pressure is insufficient to cause their electrons to leave the atom, even though the orbits in which they revolve about the protons might be distorted.

THIS LEADS to the explanation of how the electrons affect the insects, which infest the grain. Going back for the moment to the constitution of matter and the definition that matter is any tangible substance that has weight and dimensions, the grain and the insects both fall into this category, and the atoms of which the insects and the grain are composed, likewise contain electrons and protons, but are on the insulator side as far as the transmission of electrical currents are concerned.

The idea now is to make the infested grain a part of an electric circuit with an electrical pressure applied to this circuit of sufficient value to cause a strain in the electrons within the grain and insects, but not high enough to cause them to leave their respective atoms. By alternately applying and removing this electrical pressure the electrons will be set in motion back and forth from their normal to their strained position, and as energy is expended in this motion, it causes the grain and insects to heat. This motion is brought about in a practical way by the application of an alternating voltage similar to that used in your home for lighting purposes, which is referred to as 60-Cycle Alternating Current.

It has been found by experiment that the 60-



Cycle frequency is too low to create sufficient losses within the grain to reach the desired temperature. And so by the use of electronic tubes, high frequency oscillators have been built to produce frequencies of millions of alternations per second.

**THE UTILITIES RESEARCH COMMISSION** of Chicago have carried on experiments along these lines, and quoting from articles which they have published, it was found that a period of fifty seconds was required to raise the temperature of six and one-half cubic inches of grain to 130 degrees F. and at this temperature all four life stages of the insects were destroyed. Quoting further from the publications of the Utilities Research Commission various temperatures and time intervals were tried but it appeared that fifty seconds were required to bring the grain up to 130 F. with an ambient temperature of 80 F.

While the application of induction heating to the control of insects in grain is still in the laboratory, the method has been successfully used in other industries such as the bonding of plywood, plastics, etc.

You will appreciate that this paper is not complete in theory, but if it has conveyed to those of the grain industry some understanding of the theory behind the method, it will have served a purpose.

## Supply Trade

**Washington, D. C.**—The Smaller War Plants Corporation has prepared a booklet summarizing the services small manufacturers may receive. New Products, inventive ideas and foreign patents are covered.

**Following recommendations** by the advisory committee of the grain machinery industry the W.P.B. has lifted restrictions on the sale of used feed and flour mill machinery and equipment. Hitherto these were subject to preference ratings.

**Schenectady, N. Y.**—The General Electric Co. booked a total of \$1,360,643,350 of new business during 1943, 32 per cent less than the record total of 1942. Unfilled orders are about equal to a year's output, according to Gerard Swope, pres.

**During** the past two years 26,000 acres of abaca have been planted in Costa Rica, Guatemala, Honduras and Panama to supply the fiber for manila rope, formerly available from the Philippine Islands. The 40,000 acres planned should produce 50,000,000 to 60,000,000 pounds of fiber annually. Before Pearl Harbor the United States consumed 100,000,000 pounds annually.

**Delavan, Ill.**—Grain elevator operators in Illinois desiring to have their scales tested are urged to drop a postal card to Geo. Betzelberger or Fairbanks, Morse & Co., Delavan, Ill., stating when they would like to have this service, as, owing to the O.D.T. gasoline rationing and the necessity of conserving tires and equipment the firm is handicapped in complying with the rules against duplication of routing and call backs. The three field service trucks can serve all without serious difficulty by grouping calls.

**Washington, D. C.**—Food processing machinery, including flour, grain, feed milling and processing machinery and equipment, and seed cleaning equipment, is covered by the amendment of Mar. 11, issued Mar. 20, to General Limitation Order No. L-292, providing that no person shall deliver or accept delivery of food processing machinery except on an approved order. Any person who places an approved order shall in addition to the certification used in applying the rating (Priorities Regulation 3 or 7) give the form number upon which he received the rating, or if the rating was assigned by CMP Regulation 5 or 5A, he shall add to the certification a statement substantially as

follows: "This rating was assigned by CMP Regulation 5 (or 5A) and the machinery is ordered to replace other machinery of substantially the same size and capacity, worn out or damaged beyond repair." Processors requiring the mentioned machinery should file Form WPB-541.

## From Abroad

**Sweden** reports that flaxseed and other oil seed crops are promising.

**Australia's** 1944 wheat production is estimated at 97,000,000 bus.—P.J.P.

**Sunflower seed** growing is being developed in the United Kingdom on a commercial scale.

**Mexico** is reported to be making arrangements to import 48,000 tons of wheat from Australia.

**The Italian bread ration** will be increased from 4.4 to 7 ounces per person, daily, owing to imports of foodstuffs.

**The first official** estimate of the wheat acreage in India is 32,361,000 a decrease of 1,250,000 acres under last year.

**A shipment** of red squill from North Africa has been received in the United Kingdom, helping to relieve the serious shortage of rat poison.

**Canada** shipped to Russia a total of 8,739,342 bushels of wheat and flour under the \$10,000,000 Canadian-Soviet credit agreement reached last year.

**India** is expected to have the record-breaking rice crop of more than 28,500,000 tons, which is a million tons more than the amount consumed pre-war.

**British Bread** after April 1 will contain 97.5 per cent wheat and 2.5 per cent rye, instead of the present adulteration of 10 per cent rye, barley and oats.

**To increase** the output of feed for animals the government of Eire has authorized millers to produce a flour of 85 per cent extraction, with an addition of barley flour. Compulsory wheat growing has been introduced.

**In a new trade agreement** with Sweden, Germany has agreed to safe conduct of shipping westwards. Seventeen Swedish ships are outside the blockade, mainly in South American ports. Some of these will take wheat and oil cake to Sweden.

**Mr. de Valera** gave warning of the possibility of a serious food shortage in Eire. He stated that instead of 440,000 tons of wheat needed with the present 85 per cent extraction only 260,000 tons were expected to be available from the 1943 crop.

**A recent decree** provided that the Argentine grain board's guaranteed minimum price of 91c per bu. for 1943-44 crop flax would be effective only from Dec. 1, 1943, to Apr. 30, 1944, and that as of May 1, 1944, the board will pay not more than 70c per bu.

**Wheat stocks** in Australia as of Feb. 1, 1944, totaled approximately 225,000,000 bus., including 94,000,000 bus. of new wheat. The new crop is now estimated at 110,000,000 bus. compared with 97,000,000 bus. previously indicated. Harvesting is practically completed. Weather conditions at harvest time were excellent on the whole. The acreage seeded to wheat for the 1943-44 harvest is now placed at approximately 8,300,000 acres.—Cable from Canadian Trade Commissioner in Melbourne. D-D-D.

**The remaining surplus** of corn in Argentina, officially estimated at around 5,600,000 bus., is reported to be determined on the basis of the total quantity of wheat sold by the Grain Regulating Board for use as forage and taking into account corn exported since July 12, 1943. The favorable weather has reduced consumption of dry forage, and it was found economically advantageous to replace corn by wheat to the extent of 500,000 tons. Hence the exportable surplus of corn is greater than was expected.—*Corn Trade News*.

**Argentina's** corn crop is unofficially forecast as 393,000,000 bus.

**Eduardo Suarez**, finance secretary for Mexico, reports that the government is completing arrangements to import essential commodities to the amount of 60 million dollars. Mexico already has purchased 180,000 tons of corn from the United States and 460,000 tons of wheat from the United States, Canada and Australia.

**The Argentine Minister of Agriculture** has requested manufacturers of vegetable oils to increase production of linseed oil, using seed from both the 1942-43 and the 1943-44 crops, says the foreign press. If the proposed increase is carried out, a total of 1,500,000 metric tons of flaxseed will be crushed, giving a monthly rate of 35,000 tons of linseed oil.

**Argentina's** 1944 sunflowered crop, harvesting of which will commence in a few weeks, is tentatively and unofficially estimated at an all time record of between 1,100,000 and 1,300,000 short tons, according to reports to the Department of Agriculture's Office of Foreign Agricultural Relations. This compares with the poor crop of 372,000 tons in 1943 and with the previous record of 738,000 tons in 1942.

## Oppose Price Ceiling on Rough Rice

By J. H. GLASS

At a meeting in DeWitt, Ark., March 7, Arkansas county, rice growers and millers went on record as vigorously opposing a proposed OPA price ceiling on rough rice. Leon Garot, president of the Arkansas County Farm Bureau, appointed D. L. Tindell, Bryan Jessup, Eric Jensen and Ted Muller, a committee to meet with committees from other sections of the state at state meetings, with representatives from Louisiana and Texas, to propose equitable prices on rough rice.

These prices would be based on a 24-year average; and be submitted to the OPA in the hope that rough rice prices may be placed "in line" with the average. R. E. Short, president of the Arkansas Farm Bureau, spoke to the growers, urging them to "speak up" while they had opportunity to present their case. Ceilings go into effect on rough rice Apr. 15.

A resolution opposing Office of Price Administration rough rice ceilings to become effective April 15 was adopted at a state meeting of committeemen appointed by the Arkansas Rice Growers Co-operative Association at Stuttgart, Ark., Mar. 15.

The meeting went on record also as opposing government grading of rice mill quotas, restricted movements of milled rice per month, and limited milling day. It recommended that inequalities now existing between rice varieties be corrected and protested the proposed ceiling on all new varieties, declaring this would discourage development of new varieties and seriously retard the work of experiment stations.

## At Eleven O'clock

[At 11:00 A. M. each day, all in the Exchange Hall of the Chicago Board of Trade bow their heads in silent tribute to the members of our armed forces.]

At the stroke of the gong there comes a hush  
And all is quiet, no hurry, no rush.

The mart comes to rest on the Board of Trade

While a tribute to our heroes is paid.  
To the fighting men of this country grand  
In air, the sea and on the land,  
Who bear the arms of our noble cause  
We dedicate to them this solemn pause.  
That we the safer than those out there  
May in silence bow our heads in prayer,  
That they be guided by Him Divine  
While thoughts of them our hearts enshrine.  
To those who linger to watch our trade  
We ask they join our minds parade,  
To more quickly bring the end we yearn  
Victory, peace and their safe return.

HARRY C. SCHAAK.



## Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Corvallis, Ore.—Reports show that there will be an extra heavy increase in acreage of Austrian peas and vetches other than hairy vetch, this year.—F. K. H.

Pendleton, Ore., Mar. 15.—No damage from severe weather has been reported to fall sown wheat which is 2 inches above ground in some parts of Umatilla county.—F. K. H.

Portland, Ore.—Warm rains have brought ideal growing weather. Wheat crop outlook is exceptionally good in most parts of Oregon.—F. K. H.

Topeka, Kan., Mar. 11.—There have been some good rains thru western Kansas recently, and wheat is definitely looking good. Dust had started to blow some time ago, but recent moisture stopped that. As soon as ground dries out farmers will start planting barley.—H. L. Collins, Kansas Agricultural Statistician.

Pendleton, Ore., Mar. 6.—Wheat growers this week welcomed the heavy blanket of snow, as a protection against colder weather. Urgently needed war crops in Oregon are threatened by increased wheat plantings, the Oregon State college extension service has advised. So much land is going into wheat planting that "not enough will be available to reach some other objectives."—F. K. H.

Decatur, Ill., Mar. 18.—With spring planting almost at hand, producers thruout the country are now making their final planting decisions for the greatest agricultural output in history. The 1944 agricultural goal calls for 380 million acres, the largest acreage ever planted in this country. This, with 8,562,000 workers on farms Mar. 1, the lowest number on record for that date, and a decline of 168,000 farm workers from a year ago. This situation explains the general uneasiness among growers as to their operations this season.—Baldwin Elevator Co.

Winchester, Ind., Mar. 18.—We've had another week of temperatures running from 75 down to 12 above zero, with rain and plenty of snow, most of it melting as soon as it struck the ground. This is holding back our spring work but insures much needed sub-soil moisture. While we cannot possibly have a normal wheat crop this moisture is bringing out some fields we thought were completely gone, it is also helping the young clover. If nothing happens from here on we will at least get enough to re-seed this part of the country.—Goodrich Bros. Co.

Moscow, Ida.—Production goals for Latah county this year include peas with 70,000 acres, 5,000 acres more than last year's production. Wheat acreage has been set at 61,161 acres, nearly 15,000 more than last year.—F. K. H.

Topeka, Kan., Mar. 17.—Wheat in central and eastern Kansas is in excellent condition and has been making fairly good growth. In the northwest, extreme north central and extreme western parts of the state, wheat is in various stages of development. Wheat that came up last Fall and was able to withstand the drought is in good condition, but there is a considerable acreage of late planted wheat that is small and poorly rooted. Soil blowing has caused some damage to this wheat.—Kansas Weekly Crop Bulletin.

Fort Worth, Tex., Mar. 16.—Texas is facing a most prosperous prospect for a wheat and oat crop, as with ample subsoil and topsoil moisture over the entire state, it is certain at this time our prospects are far ahead of recent years. With the exception of a few localities, the wheat is up to a good stand and normal acreage planted, so we are hopeful of producing better than a normal crop in Texas this year. In fact, under proper conditions we could produce over 40,000,000 bus. Oats are also in good condition, with a large acreage of spring oats now being planted in the Panhandle sections, and with the fall planted oats promising better than a normal crop, we feel hopeful of producing twice as many as last year. Corn conditions, however, are far from satisfactory, as continual rains have delayed preparing ground and planting, and many places in South Texas report from two to four weeks behind with work. Grain sorghum acreage will doubtless be increased. Members of this Association still find it impossible to buy sufficient corn for their requirements, and also are having difficulty obtaining supplies of oats and barley.—G. E. Blewett, sec'y-treas. Texas Grain & Feed Dealers Ass'n.

Chicago, Ill., Mar. 15.—Condition of winter wheat from Belleville, Kan., to Kanorado, Kan., continues to improve as much of the wheat which was planted in dry soil now has sprouted as a result of recent rains and snows which fell since the last of January. From Belleville to Dresden fields were covered with snow during the week of Mar. 6. While there was a 2% increase in acreage seeded along the line last fall, because of the poor start, probably 40% of the acreage will be abandoned and planted to barley, corn, oats and sorghums. There is no volunteer wheat. Prospects based on present outlook are for less than half the 1942 crop this year. As a result of abandoned wheat acreage, the acreage of spring planted crops will show some increase over last year. Wheat planted on fallowed ground is in the best condition of any in this territory. The territory from Herington to Liberal and including the Dodge City Branch has greatly increased

winter wheat acreage as compared to a year ago, these increases running from 55% in the vicinity of McPherson, Hutchinson, Pratt and Dodge City to 30% and 40% increases at Mineola, Meade and Liberal. The wheat in this territory, due to continuous rains and snows, now has plenty of moisture and is in good condition. Plants are well developed and there are good prospects carrying far into the Summer. Little abandonment is expected from Herington to Dodge City. Territory along the Rock Island Lines in the Dallas-Fort Worth, Tex., area has an ample supply of moisture as contrasted to the serious shortage during the latter part of 1943. Oats planting is 25 days late on account of excessive rains. Reports indicate a reduction in cotton acreage of 10% and an increase in corn acreage of 5%. Winter wheat was up to a good stand and estimates are for a yield of 85% of normal. Condition of winter wheat along our line from Burlington to Colorado Springs, Colo., is about 30% of 1943; 50% of 1942 and 70% of normal. Colorado produced 29,381,000 bus. of winter wheat in 1943 and is expected to produce only about 9,000,000 bus. in 1944.—Agricultural Report, The Chicago, Rock Island & Pacific Rwy. Co.

Vinita, Okla., Mar. 22.—We are having too much wet weather; it has stopped oat sowing and am afraid our acreage is going to be short. We are unable to get shipment of corn for the last month; stocks are entirely depleted in this county, also same condition exists in all the counties we cover. Looks very serious. Our flax acreage will be somewhat smaller this year; however, think some who did not get to sow oats will put that acreage in. Farmers seeding a lot of lespedeza, even at the higher price this year.—Hugh Witt, Witt & Stokes.

## Intentions to Plant

The U. S. Dept. of Agriculture made its report Mar. 20 on farmers' intentions to plant in 1944.

The area farmers intend to plant to corn this year is reported as 99,583,000 acres, compared with 97,136,000 last year, and 96,276,000 acres, the 1933-'42 ten-year average acreage.

Intentions for planting all Spring wheat are reported as 19,805,000 acres, compared with 17,275,000 acres last year, and 20,083,000 acres, the ten-year average.

Farmers' intentions for planting oats call for 46,170,000 acres, compared with 42,858,000 acres last year, and 41,059,000 acres, the 1933-'42 ten-year average.

Altho the indicated corn acreage was slightly below the goal, if yields equal the 1939-'42 average production will total 3 billion, 126 million bushels.

Soybeans, a crop particularly stressed by the War Food Administration in the 1944 program, was listed at a prospective 14,619,000 acres, a surprising decrease of 1 per cent.

## Daily Closing Prices

The daily closing prices for wheat, rye, oats, and barley for May delivery at the leading markets in cents per bushel, have been as follows:

	Option		Wheat																							
	High	Low	Mar. 8	Mar. 9	Mar. 10	Mar. 11	Mar. 13	Mar. 14	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 20	Mar. 21												
Chicago	173 3/4	146 1/4	170 1/4	170 1/4	171 1/4	171 1/4	171 1/2	171 1/4	171 1/4	172	172	172 1/4	172 3/4	173												
Minneapolis	165 3/4	139 1/4	162	162	162 1/4	162 1/4	162 3/4	162 3/4	163 1/4	163 3/4	164	164 1/4	164 3/4	165 3/4												
Kansas City	163 1/4	139 1/4	161 1/4	161 1/4	162	162 1/4	162 1/4	161 1/4	162 1/4	162 1/2	162 1/2	162 1/2	163 1/4	163 1/2												
Duluth, durum	163 1/2	140 1/4	158 3/4	158 3/4	159	159 3/4	159 3/4	158 3/4	160 3/4	161 1/4	161 1/4	162 1/4	162 3/4	163												
Milwaukee	173	146 3/4	170 3/4	170 3/4	171 1/4	171 1/2	171 1/2	171 1/4	171 1/4	172	172	172 1/4	172 3/4	173												
Rye																										
Chicago	134 3/4	100 1/4	126 3/4	126 3/4	128 1/4	128 3/4	129 3/4	128 3/4	129 1/4	130 1/4	129 1/4	129 3/4	129 3/4	130 3/4												
Minneapolis	129 3/4	94	120 3/4	120 3/4	121 3/4	122 3/4	123 1/4	122 3/4	123 3/4	124	123 3/4	123 3/4	124 1/4	124 3/4												
Milwaukee	134 3/4	100 1/4	127	127	128 1/4	128 3/4	129 3/4	128 3/4	129 1/4	130 1/4	129 1/4	129 3/4	129 3/4	130 3/4												
Winnipeg	131 1/4	92 3/4	126 3/4	126 3/4	127 3/4	128 3/4	128 3/4	127 3/4	128 3/4	129 3/4	128 3/4	128 3/4	129 3/4	129 3/4												
Duluth	128 3/4	119 3/4	120 3/4	120 3/4	121 3/4	122 3/4	123 1/4	122 3/4	123 1/4	124	123 3/4	123 3/4	124 1/4	124 3/4												
Oats																										
Chicago	81 3/4	67 3/4	80 1/2	80 3/4	81 1/2	81 1/2	81 3/4	81 3/4	81 1/2	81 1/2	81 3/4	81 3/4	81 3/4	81 3/4												
Minneapolis	79	62 3/4	79	79	79	79	79	79	79	79	79	79	79	79												
Milwaukee	81 3/4	67 3/4	80 1/2	80 3/4	81 1/2	81 1/2	81 3/4	81 3/4	81 1/2	81 1/2	81 3/4	81 3/4	81 3/4	81 3/4												
Barley																										
Minneapolis	116 1/4	106 1/4	116	116	116	116	116	116	116	116	116	116	116	116												
Chicago	127 1/4	113 3/4	122 1/4	122 1/4	124 1/4	124 1/4	126	125 1/4	125 1/4	125 1/4	125 1/4	126	126 1/4	126												

## Open Interest in Future Deliveries

As reported by the Compliance Branch of the Food Distribution Administration the open interest in all futures on the Chicago Board of Trade recently has been as follows, in 1000 bus.:

	Wheat	Barley	Oats	Rye
Dec. 11	36,923	1,339	14,633	38,841
Dec. 18	38,870	1,324	15,331	39,680
Jan. 15	33,604	1,320	12,702	43,648
Jan. 22	34,385	1,321	12,950	45,592
Dec. 24	35,175	1,205	13,681	38,834
Dec. 31	37,348	1,236	13,793	39,428
Jan. 8	32,775	1,339	14,683	38,841
Jan. 15	33,604	1,329	12,702	43,648
Jan. 22	34,385	1,321	12,950	45,592
Jan. 29	34,480	1,302	12,866	45,716
Feb. 5	34,486	1,272	12,659	46,672
Feb. 11	34,452	1,311	12,897	47,459
Feb. 19	34,954	1,359	13,381	47,784
Feb. 26	34,881	1,344	13,652	48,476
Mar. 4	33,988	1,352	13,682	47,933
Mar. 11	34,157	1,387	13,788	48,958
Mar. 18	34,076	1,394	13,924	48,226



## Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

Vancouver, B. C.—Lack of U. S. freighters for grain transport is reported to have caused a sharp drop in water borne wheat shipments from Vancouver in March.—F. K. H.

Grand Rapids, Mich., Mar. 20.—The next three months will be the lightest three months in 30 years for deliveries by farmers of grain and beans here in Michigan.—C. H. Runciman Co.

Washington, D. C., Mar. 12.—Export grain unloaded at the United States ports during February, says the Association of American Railroads, totaled 3,373 cars compared with 2,796 cars in February, 1943.

Ottawa, Ont., Mar. 9.—Shipments of Canadian grain to United States the week ended March 9, in bushels, totalled wheat, 1,953,725; oats, 299,840; barley, 57,036; flaxseed, 24,990. Total shipments since Aug. 1, 1943, were, in bushels, wheat, 113,880,807; oats, 27,252,218; barley, 16,371,584; rye, 4,162,976; flaxseed, 6,700,478.—Dominion Bureau of Statistics.

St. John, N. B., Mar. 11.—Transportation of flour and feed into the eastern provinces from the western provinces continues to provide a distressing problem for shippers, wholesalers, exporters, consumers, retailers. Movements of the flour and feed and also of grain have been slow on the railroads and complaints have resembled a deluge. The railroads seem to be giving little attention to the protests. In the meanwhile there is no improvement.—W. McN.

## February Receipts and Shipments

The following reports were received too late or publication with other tables appearing on page 185 of March 8 issue, expressed in bushels:

WHEAT				
	Receipts		Shipments	
	1944	1943	1944	1943
Ft. William	12,717,758	4,425,542	4,405,642	3,212,926
New Orleans	316,746	.....	158,754	1,503
New York	248,950	1,429,812	339,000	2,680,000
Philadelphia	1,086,673	1,412,299	542,371	1,865,655
Portland	915,240	628,640	150,169	.....
Toledo	1,293,700	1,025,100	1,453,500	724,200

CORN				
	1944	1943	1944	1943
Ft. William	1,366	4,710	2,165	2,951
New Orleans	1,055,522	311,028	696,198	172,078
New York	31,150	4,525	.....	.....
Philadelphia	606,493	394,645	296,710	52,117
Portland	321,324	107,095	.....	.....
Toledo	640,000	1,281,600	211,200	731,200

OATS				
	1944	1943	1944	1943
Ft. William	768,734	3,076,535	734,537	2,947,553
New Orleans	71,738	9,964	63,548	10,215
New York	16,800	86,769	.....	.....
Philadelphia	32,041	31,568	32,964	22,436
Portland	74,363	.....	.....	.....
Toledo	134,400	727,195	79,800	610,000

RYE				
	1944	1943	1944	1943
Ft. William	1,366,492	429,016	46,723	33,802
New York	1,428	1,500	.....	.....
Portland	6,563	.....	.....	.....
Toledo	.....	19,500	.....	6

BARLEY				
	1944	1943	1944	1943
Ft. William	1,020,419	2,280,161	188,832	1,067,394
New Orleans	.....	.....	8,000	45,200
Philadelphia	1,798	1,798	3,284	2,509
Portland	77,092	114,080	96,146	.....
Toledo	202,500	145,500	9	26

SOYBEANS				
	1944	1943	1944	1943
Philadelphia	406	20,768	.....	.....
Toledo	225,600	297,600	87	99

KAFIR-MILO				
	1944	1943	1944	1943
New Orleans	3,300	.....	1,100	2,200

FLAXSEED				
	1944	1943	1944	1943
Ft. William	420,635	410,183	340,854	423,045
New York	939,317	132,106	.....	.....
Portland	57,427	45,236	.....	.....

MIXED GRAIN				
	1944	1943	1944	1943
Ft. William	37,146	8,851	6,171	9,746

HAY				
	1944	1943	1944	1943
Portland (tons)	1,508	695	.....	.....

Portland, Ore.—Feed wheat situation continues acute. There has been talk of increasing volume of Canadian wheat moving into United States territory for feed purposes, but the volume continues far below the needs.—F. K. H.

Winchester, Ind., March 18.—During the past month we have been buying corn in Illinois and re-selling it down east, but last week the supply dried up completely. The talk in Washington about raising the ceiling price and requisitioning the corn from the country elevators has brought the movement to a standstill.—Goodrich Bros. Co.

Burtonview, Ill.—The C.C.C. recently ordered all soybeans bought and stored by it in Logan County last fall to be shipped out immediately. Leight W. Lucas, A.A.A. chairman reported. There are 20,500 bus. of beans stored at Burtonview, Mount Pulaski and Chestnut, Mr. Lucas said. He states that these shipments will clear all stored grain from elevators in Logan County.—P. J. P.

Ottawa, Ont., Mar. 16.—The following quantities of wheat and coarse grains were delivered from farms in western Canada the week ended Mar. 9, expressed in bushels: Wheat, 5,482,072; oats, 1,047,703; barley, 486,739; rye, 71,524; flaxseed, 19,535; since Aug. 1, 1943, as compared with the same period a year ago, shown in parentheses, expressed in bushels: Wheat, 179,004,217 (170,687,693); oats, 77,184,243 (68,074,516); barley, 59,254,169 (50,443,128); rye, 3,691,632 (4,802,889); flaxseed, 13,837,113 (10,490,776).—S. A. Cudmore, M. A., Dominion Statistician.

## C. C. C. 1945 Loan Maturities

WHEAT, on demand, or Apr. 30, 1945.  
CORN, on demand, or Sept. 30, 1945.  
RYE, on demand, or Apr. 30, 1945.  
BARLEY, on demand, or Apr. 30, 1945.  
GRAIN SORGHUMS, on demand, or June 30, 1945.  
FLAXSEED, on demand, or Mar. 3 or June 30, 1945.

## C.C.C. Grain Loan Maturities

WHEAT, warehouse stored, Apr. 30, 1943; farm stored, Apr. 30, 1944.  
CORN, all stored on farm, on demand, or Oct. 1, 1944.  
BARLEY, on demand, but not later than Apr. 30, 1944.  
GRAIN SORGHUMS, on demand, but not later than June 30, 1944.

## Parity and Farm Prices

PARITY						
Date	Wheat	Corn	Oats	Rye	Barley	Soybeans
Jan. 15..	139.7	101.4	63	113.8	97.8	162
Feb. 15..	141.4	102.7	63.8	115.2	99	164
Mar. 15..	142.3	103.4	64.2	115.9	99.7	165
Apr. 15..	143.2	104.0	64.6	116.6	100.3	166
May 15..	144.1	104.6	65.0	117.4	100.9	166.0
June 15..	145.0	105.0	65.4	118.0	102.0	167.0
July 15..	146.0	106.0	65.8	119.0	102.1	168.9
Aug. 15..	146.0	106.0	65.8	119.0	102.0	168.0
Sept. 15..	146.0	106.0	65.8	119.0	102.0	168.0
Oct. 15..	147.0	107.0	66.2	120.0	103.0	169.0
Nov. 15..	148.0	107.0	66.0	120.0	103.0	169.0
Dec. 15..	149.0	108.0	67.0	121.0	104.0	161.0
Jan. 15..	149.0	108.0	67.4	122.0	105.0	162.0
Feb. 15..	150.0	109.0	67.8	122.0	105.0	163.0

FARM PRICES						
Date	Wheat	Corn	Oats	Rye	Barley	Soybeans
Jan. 15..	117.5	88	52.5	61.3	68.3	159
Feb. 15..	119.5	90.4	55.5	64.1	70.7	160
Mar. 15..	122.7	94.8	58.4	68.9	74.8	165
Apr. 15..	122.3	100.2	61.1	69.5	77.3	167
May 15..	122.8	103.4	61.2	71.9	76.8	172.0
June 15..	124.0	106.0	64.8	79.7	83.9	173.0
July 15..	126.0	108.0	66.6	90.9	92.0	170.0
Aug. 15..	127.0	109.0	65.2	88.4	92.9	168.0
Sept. 15..	130.0	109.0	69.6	94.9	96.5	169.0
Oct. 15..	135.0	107.0	74.4	101.0	103.0	180.0
Nov. 15..	137.0	105.0	75.0	102.0	103.0	180.0
Dec. 15..	143.0	111.0	76.9	107.0	105.0	181.0
Jan. 15..	146.0	113.0	77.5	110.0	108.0	182.0
Feb. 15..	146.0	113.0	78.6	111.0	109.0	185.0

Upwards of one-half million parasitic flies will be released in Iowa early in June to attack the corn borer in the most heavily infested counties, Dr. Carl J. Drake, state entomologist, said. Forty-seven Iowa counties now are under corn-borer quarantine.—P. J. P.

After weeks and months of discussion, the War Production Board has taken the first steps to experiment in the use of rye as grain, as well as rye grits, in the distillation of industrial alcohol. A sixty-day experimental period in two small eastern plants which use about 1,000 bus. daily jointly has been ordered. The industries in question are to use a mixture of 20% rye grits.—F. C. Bisson, director of public relations, Chicago Board of Trade.

## C.C.C. Loan Rates on Grain

BARLEY, on farms, No. 1, 75c; No. 2, 73c; No. 4, 67c per bushel. In California, Idaho, Oregon and Washington, 5c higher.  
SORGHUMS, on farms, No. 2 or better, 85c; No. 3, 80c; No. 4, 70c. In Arizona and California, 5c higher.

FLAXSEED at Minneapolis \$2.85 for No. 1.  
CORN, 81c to \$1.01 per bushel for No. 3.  
WHEAT, average \$1.23 per bushel on farm.  
SOYBEANS, \$1.80 per bushel at the country elevator for No. 2 green and yellow of 1943 crop.

RYE, for No. 2 or better, 75c on farm, 68c in warehouse, no farm storage payment.

## C. C. C. 1944 Loan Rates

WHEAT, 85% of parity as of July 1, 1944, available until Dec. 31, 1944, on farm or warehouse stored.

CORN, farm stored, 85% of parity as of Oct. 1, 1944, available from Dec. 1, 1944, to June 30, 1945.

RYE, 75c for No. 2 or No. 3, solely on test weight, on farm or in warehouse, until Dec. 31, 1944. Deduction of 7c on warehouse stored rye.

BARLEY, 90c per bushel for No. 1 on Pacific slope, 85c in other states, on farm or in warehouses. Deduction of 7c on warehouse stored.

SOYBEANS, \$2.04 per bu. to farmers for green and yellow of 1944 crop, No. 2, delivered to country elevators. Available to Jan. 31, 1945.

GRAIN SORGHUMS, on farm or in warehouse for No. 2, \$1 in Arizona and California, and 95c in other states.

FLAXSEED on farm or in warehouses at \$2.95 basis Minneapolis for No. 1, 25c less for No. 2, per bu., until Oct. 1, 1944, or Jan. 31, 1945.





# The Southwestern Corn Borer

By D. A. WILBUR, H. R. BRYSON, and R. H. PAINTER  
of the Kansas Agricultural Experiment Station

While the attention of the corn growers of Kansas and the other mid-western states had been focused on the widely publicized European corn borer moving into the heart of the Corn Belt from the East, a relatively unheralded corn pest from Mexico, known as the Southwestern corn borer, (*Diatraea grandiosella* Dyar) invaded central and western Kansas from the South. During the brief period of 1940-1942 this insect became established in about one-half of the counties of the state and even reached counties bordering Nebraska.

In 1941, 533,300 acres of corn representing 23 per cent of the Kansas corn acreage were located in these infested counties. By 1942 the Southwestern corn borer had increased in numbers sufficiently to infest nearly all of the cornstalks in an area covering several counties in southcentral Kansas and had caused such damage that in certain fields the crops were not worth harvesting. In other fields in which an excellent crop was produced, the borers by girdling the lower part of the stalks cause up to 75 per cent of the stalks to lodge shortly before harvest time.

The Southwestern corn borer crossed the Mexican border into Arizona, New Mexico and Texas in or before 1913. By November of 1931, it had established itself in the Panhandle of Oklahoma, in southeastern Colorado, and in the southern part of Morton and Stevens counties in Kansas.

During the mid-summer of 1941 there were reports of renewed activity of the borer in Oklahoma and in September it was learned that the insect had again invaded Kansas. The insect is now firmly established in the southwestern portion of the Corn Belt, and there is little possibility of its eradication.

The heaviest infestation at present occurs in a strip about 100 miles wide and extending between Ellis and Barber Counties. In this area all fields examined were infested, and all except early planted fields showed from 80 to 100 per cent of the stalks infested.

**MOTHS.** The females are approximately three-fifths to three-fourths of an inch long and are of a soiled white to pale yellow color (Fig. 1). The hind wings of both sexes are broader and lighter in color than the fore wings and are somewhat semi-circular. The wings are folded about the body when not in use, thus giving the moths a cylindrical appearance. The males are slightly smaller than the females and are somewhat darker. During the day the moths are likely to be hidden in the corn plant and, unless disturbed, are active only at night. Even in heavily infested fields these moths could escape the notice of anyone not familiar with them.

**EGGS.** The eggs are elliptical to oval in shape and decidedly flattened with a slightly convex upper surface. The eggs were translucent, white in color and did not develop the three transverse, pink or orange-red markings characteristic of most of the eggs observed in the field. Eggs were found on both the upper and lower surfaces of leaves, either singly or overlapping one another in chains or masses of several eggs. In the field the eggs were scattered from the tip to the base on the leaves below the whorl.

**LARVAE (BORERS).**—With the exception of the overwintering forms, the larvae are of a dull white color and are covered with a regular pattern of conspicuous dark brown or black spots (Fig. 3, left). These larvae are not likely to be confused with the larvae of any other insect in cornstalks in central and western Kansas but in southeastern Kansas it would be impossible to distinguish them from larvae of the Southern cornstalk borer which occurs in that area.

The mature borers of the second generation lose their spots, becoming white over the entire body (Fig. 3, right). Occasionally, some faint evidence of the spots remains. These all-white larvae are the ones that girdle the cornstalks in the fall, and remain unchanged from September or October until time for the short prepupal form in late May or June. Full-grown borers average between one, and one and one-fourth inches in length.

**PUPAE.**—The pupae are slightly shorter than the mature larvae and have the typical brown color of many other moth pupae. They are found within the tunnels made by the larvae (Fig. 4). Empty pupal cases are frequently seen protruding from emergence holes in the stalks.

**SEASONAL CYCLE.**—The mature larvae of the second generation are present thruout the winter in the base of the stalks. Pupae collected June 15 emerged as moths in a few days. By Aug. 1 most of the first generation larvae had pupated and the moths had emerged. Eggs were deposited during the first half of the month. By mid-September second generation borers were from two-thirds mature to mature.

All first generation larvae and all but the last instar larvae of the second generation are white with numerous dark brown or black spots. These dark spots are lost at the final molt of the second generation.

The mature borers of the second generation tunnel down the stalks well below the soil surface and usually go to the extreme base of the stalk in preparation for hibernation. A long cell is hollowed out and lined with silk.

**GIRDLED STALKS FALL.**—Before the hibernation cells are capped or even before their construction is started, certain of the mature larvae move back up the stalk to a place above the soil-surface and ream the inside of the stalk until only a very thin outer shell remains. This reaming, which is a form of internal girdling, may completely sever the stalk so that it falls to

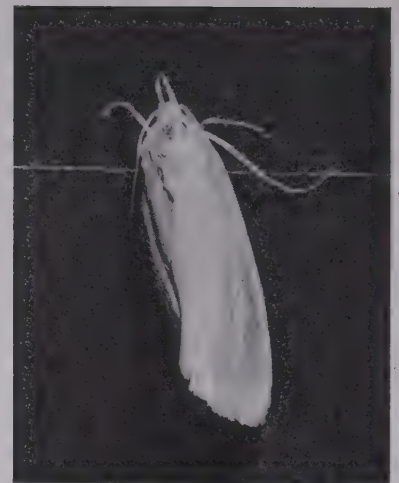


Fig. 1. Adult Female Moth. (Enlarged 1.5 times)

the ground immediately or it may partially cut the stalk so that it will remain standing for an indefinite period. The time required for partially-girdled stalks to fall depends on the proportion of the circumference of the stalk reamed, the amount of sap remaining in the base of the stalk, the weight of the upper part of the plant and the severity of winds. Some partially girdled stalks do not fall until after the ears have been harvested. Usually, there is no external evidence that internal girdling has been done within a stalk until the stalk falls. A fine hairline occasionally is visible at the point where the reaming has been done and with slight pressure such stalks break readily.

**SUMMER ACTIVITIES.**—Larvae of the first generation feed within the whorl until they are about half-grown. Then they move down the stalk and attempt to enter at any internode. Entrance holes are usually made near the base of the leaf blade or within the protective covering of the leaf sheath.

During this period the borers appear restless and may be found wandering up and down the



Fig. 2. Flat Elliptical Eggs on Corn Leaf. (Enlarged about 5 times.)

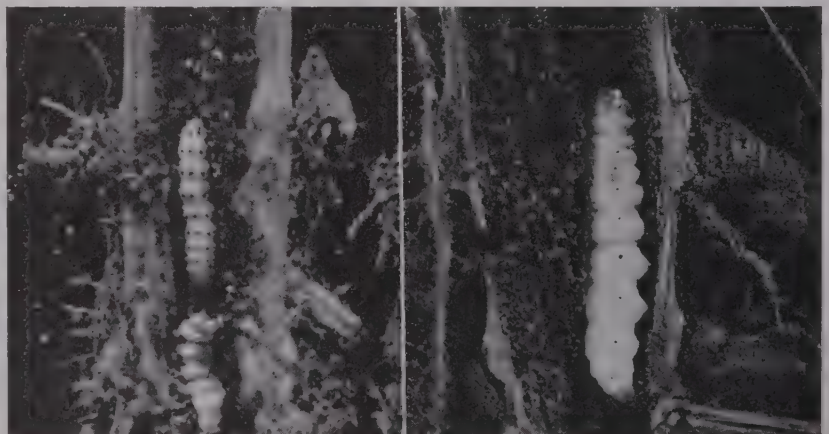


Fig. 3. Left, above: Live Spotted Summer Larva; below, Dead Larva. Right: White Hibernating Larva



stalk. Some of the borers may construct a cell out of frass and borings between the leaf sheath and stalk. Frass accumulates in quantities inside the leaf sheath as a result of groovings made on the outside of the stalk, and on the inside of the leaf sheath. The borers have not been observed migrating across the ground to neighboring corn or sorghum plants. In some cases, they appeared to have moved to other tillers on the same plant or to other stalks in the hill.

The feeding activities of the borers in the whorls are likely to sever the buds, thus bringing about a condition known as "dead heart." Within a cornfield these severed whorls assume a bleached or blasted appearance and stand out prominently among the green foliage.

**BORING WITHIN THE STALK.**—After the larvae are approximately half grown, they leave the leaf whorl, move down the stalk and enter one of the internodes above the soil surface.

Farmers generally are unaware of shank and ear injury. One farmer in speaking of the injury by the borers, said that he was thankful that the borers did not work around the ear. Upon examining his own corn, which had made an excellent growth despite borer attack, it was found that the first 10 ears examined were infested in the shanks, or ears, or in both.

Early infestations in both stalks and ears may cause the development of the ear to be so retarded that no grain is formed. With later infestations the grain production may be normal even though the shank is entered. Occasionally, the shanks are so badly riddled that the ears drop.

While effective control measures have not been worked out, limited experimental data and observations indicate that substitution of sorghums for corn, early planting of corn, late fall treatment of stalks and stubble to expose the overwintering larvae to the rigors of winter, deep plowing of stubble, and low cutting of stalks, are all practices which should contribute much to the control of the Southwestern corn borer in Kansas.—Bulletin 317. Kansas Agricultural Experiment Station.

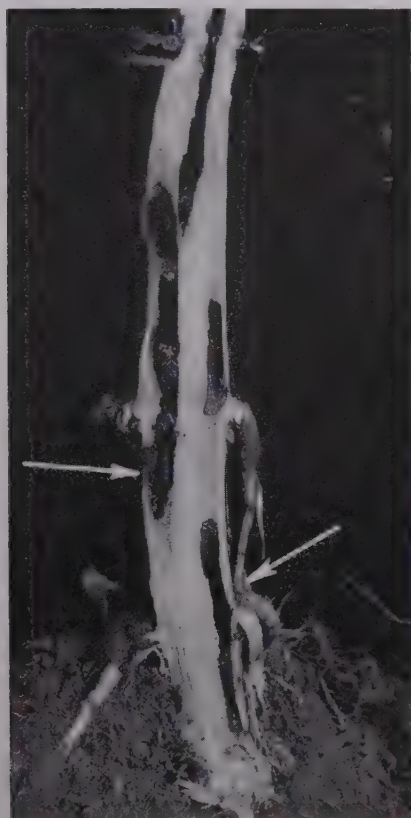


Fig. 4. Split Stalk with First Generation Pupae in Tunnels

## Culling Merchandise, Culling Customers

The Northeastern Indiana Hay & Grain Dealers Ass'n held its regular dinner-meeting on Mar. 13th at the Wayne Hotel in Fort Wayne, with fifty-five members in attendance. Phillip E. Legge presided.

Fred K. Sale, Secretary of the State Ass'n attended and he conducted a general discussion of the various problems including corn ceilings and soy bean regulations.

The Association voted unanimously to oppose a premium based on a one per cent moisture break in beans.

Motion was made by Walter Penrod and adopted that, a request be made by the Ass'n for a handling charge for soy beans of .67½c per bushel; also, a sliding scale of purchase prices, to be advanced .02c per bushel each month, beginning Dec. 1st. The object of a sliding scale of prices is to promote a more orderly movement of beans from farms.

The President appointed a program committee consisting of Walter Penrod, Lloyd R. Rumsyre and A. E. Leif.

Ed. K. Shepperd of Indianapolis attended the meeting.

Harry Cooper, Sales Manager for McMillen Feed Mills, Fort Wayne, spoke on "Dangers confronting your feed and elevator business" in which he emphasized the need of sound credit, careful selection of inventory, and better service to customers.

In stress periods such as World War II it should be remembered that you are dealing with a Condition. . . . You can't control conditions, but you can formulate your plans to operate under these conditions.

This is 1944 in a world at war. Forty-three nations quarrelling over what? Thirty-four on one side and nine on the other, and they tell us it is "World War number Two." But, I wonder!

Twenty-five years ago they told us it was "World War number One." But then, I wondered. Turning back 1200 years we find the boundary lines of the countries well established thruout continental Europe. At that time we find the strong nations moving into the weaker nations. Taking the natural resources of the soil—Food, if you please, for their people. Through lack of understanding of how they might give or sell their excesses (or natural resources of the soil) to those in need—the world has been at war—and those wars have continued until today.

It is absolutely essential that you set your business in good order and above all make definite plans which will enable you to meet the almost certain dangers which usually develop in the aftermath of war. Don't be deceived by present large demands for merchandise or the apparent prosperous condition of your patrons. Such deception leads to loose methods of doing business.

Let's look at the record of a business located in another territory to illustrate what I mean. This owner decided to sell his business and on the face of the record, it looks fairly good:

Gross sales for year .....	\$198,632.62
Net profit, after taxes .....	10,192.00
Accounts Receivable .....	18,747.30
Inventory .....	19,764.00
Salaries .....	6,964.00

What's wrong?

Well, first of all the Accounts Receivable should be \$3000 instead of \$18,000.00. Book accounts should not exceed 25% of sales for each monthly period and not more than 10% of this amount should remain more than 60 days. (This of course is more or less controlled now by Federal regulation.) What's wrong with Inventory? (listed at more than \$19,000.) First of all, it should be only \$9,000 and secondly, if inventory was based on actual demand—culling the unsaleable, and adjust inventory so as to turn it over more rapidly, it would avoid funds being tied up unnecessarily. Furthermore, this man had merchandise made up of four differ-

ent trade names, yet of more or less the same quality, which indicates he is not merchandising but just in business.

The item of \$6,964.00 for salaries is entirely too low for the volume of business and indicates not enough help, or it is inefficient. Thus it is evident that this dealer is not prepared to meet the shock which present conditions might produce very quickly. He might lose three-fourths of his accounts receivable. His inventory might cause an additional financial loss. He might become insolvent.

The way to solve most of these problems is to have an outside manager and sell your service by directing the use of your merchandise so that the farmer will receive more for his buying dollar, and will give you all of his business and be able to pay his account in 30 days.

Culling the customer is just as necessary as culling the inventory or merchandise. Why should any business firm sell merchandise that's hard to get, to any customer who does not pay his bill, or to any customer who only gives you a portion of his business?

When you dealers have set your business in order so that it will operate soundly and safely, you can relieve yourself of some of your worries and all talks about post war planning, because you will have time to take an interest in your community. Then you will soon begin to appreciate the value of Free Speech, Free Competition and Free Enterprise, which most people do not seem to know the meaning.

In my opinion Free Enterprise means freedom for your customers—freedom for your labor and free competition for your business, and when we have all this we have free democracy.

The only dangers that you will have is the danger of failure to recognize and adjust your business to meet the ever changing conditions, which have been changing for many centuries.

Think back to 1776 and the battle of Valley Forge. Those people were confronted with conditions, and their problems were adjusted to suit their needs by one strong weapon—The Power of Faith—Faith in each other and Faith in God—that they might win their Freedoms and set up a strong United Nation and leave this world a better place than they had found it.

## Your Right to Free Enterprise

Without free enterprise, we can have only a government by state socialism. There is no alternative.

Free enterprise can be menaced or destroyed in one of three ways: First, by excessive and exorbitant taxation; second, by senseless and unnecessary regimentation; third, by government competition with private business. With a strong and vigorous private enterprise system we can stand a heavy burden of taxation. We can stand intelligent and reasonable regulation, but we cannot stand government competition. This will quickly destroy the free enterprise system.—Senator Harry F. Byrd.

## Rice Ceiling Defended

Chester Bowles, O.P.A. administrator, told members of Congress who had received protests from rice producing sections of Texas, Louisiana and Arkansas, that the prices will not discourage the production desired by W.F.A. "These prices are estimated to return to producers the equivalent of 125 per cent of present parity and are based on milled rice ceilings which have been in effect for some time."

He said also the objections to the ceilings, which go into effect Apr. 15, were thoroughly discussed and that O.P.A. "cannot agree" with the objections.

Bowles said an industry committee of rough rice producers is being organized and that O.P.A. will meet with it before the effective date of the prices to reconcile all differences of opinion, before they take effect.—P. J. P.





Plans, photographs and descriptions of bulk grain handling facilities planned and erected by engineers specializing in grain elevators of modern design.

In compiling and publishing Plans of Grain Elevators we have striven to give readers a clear understanding of the advantages to be obtained in following the latest practices of experienced grain elevator engineers in designing, constructing and arranging a modern elevator.

This volume, our Fifth Edition of plans and descriptions of grain elevators, is the most interesting and the most helpful work on design and construction of grain elevators yet published. It has been confined to illustrated descriptions of Grain Elevators of North America because these elevators have been designed especially to meet the needs and conditions confronting grain merchants of this continent. It should be of real help in crystallizing the ideas of grain dealers as to the facilities best suited to the needs of their business, and in giving builders definite ideas as to what they want.

This new volume contains over 968 illustrations and descriptions of elevators constructed of concrete, tile, brick, steel and wood. Many central market storage, transfer and cleaning elevators, as well as country receiving and shipping elevators are illustrated and described. All are designed to expedite, facilitate and reduce the cost of handling bulk grain. Nothing has been taken from previous editions.

Many illustrations of feed grinding and mixing elevators as well as grain elevator offices, cob burners, corn cribs, conveyor galleries should help every dealer desiring to modernize his facilities.

This 5th edition of plans of Grain Elevators of North America is printed on 500 pages of book paper, size 9x12 inches, bound in Art Canvas, shipping weight five pounds, price \$5.00 plus postage.

Order now and plan an elevator that will not only facilitate and expedite your handling of bulk grain, but will also reduce your cost for power and labor, and correct known fire hazards.

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Chicago 4, Illinois, U. S. A.



# Grain and Feed Trade News

Reports of new elevators, feed mills, improvements; changes in firms; fires, casualties, accidents and deaths are solicited.

## ARKANSAS

Harrisburg, Ark.—J. P. Adkins has bought the feed and seed store of John H. Brown.—P. J. P.

Little Rock, Ark.—An abandoned grain elevator adjoining the Arkansas wood products plant burned recently, the fire communicated from the wood products plant.—P. J. P.

Newport, Ark.—W. B. Huff, president of the Farmers Gin Co. and manager of the Newport Rice Mill, Inc., has announced his candidacy for alderman from the Third ward.—P. J. P.

## CALIFORNIA

Willow Springs, Calif.—The Larrabee Feed Mill, operated for the past 8 years by S. H. Larrabee and his son, I. N. Larrabee, has been sold to the California Packing Co. of Chico. The local equipment will be moved to Chico.

Long Beach, Calif.—A portable pneumatic unloader has been installed at the plant of Spencer Kellogg & Sons, Inc. A 200-h.p. two stage turbo-blower, acting as an exhaustor, is used. This installation has a capacity of 120 tons per hour of grain and flaxseed from hold of ship to belt within warehouse.

Fresno, Calif.—The California Hay, Grain & Feed Dealers Ass'n will hold its annual convention April 21 and 22 at the Hotel Californian. An informative and instructive program is being arranged for the occasion. Walter C. Berger, chief, Livestock & Feed Division, Office of Production, W.F.A., Washington, D. C., will speak on the afternoon program of April 21. In addition other federal and state key men in protein allocation, conservation and feed supply have been invited to participate. The problems of inventory restrictions, 1942-43 average concentrate quotas for mixed feeds, O.P.A. ceiling adjustments, adequate markups, etc., may be discussed with these men who have authority to recommend and act on them. All grain and feed men should plan to attend.—I. J. Stromnes, sec'y.

Imperial, Calif.—The Southwest Flaxseed Ass'n has purchased part of the Desert Grain & Milling Co., which it has been renting, Argyle McLachlan, sec'y-manager, announced. Acquisition of the warehouse and plant gives the firm a permanent home and headquarters. All facilities of the milling company are included in the sale: sack storage space of 2,000 tons capacity; bulk storage bins, 3,600 tons capacity; all warehouse equipment; cleaning plant to clean flaxseed and grains; and the company's feed grinder. The mill and warehouse will be for use of the association members, but probably will be operated as a public service to other Valley growers, McLachlan indicated. Thus the association can do custom grinding and cleaning as well as provide storage for seed and grain for non-members when facilities permit. The Desert Grain & Milling Co. was purchased from S. A. Genser and Adolf Wineberg.

## CANADA

Brandon, Man.—Dr. J. A. Anderson, chief chemist, Board of Grain Commissioners for Canada, in speaking here recently, recommended establishment of small industrial plants in western Canada for the purpose of developing some of the research work already past the experimental stage.

Aylesbury, Sask.—Fire recently destroyed the Western Grain Co.'s elevator, annex and office, and 40,000 bus. of grain, the loss estimated at \$150,000.

Calgary, Alta.—An explosion in the rolled oats plant of Western Canada Flour Mills Co., Ltd., Mar. 13, set the third floor of the building afire and slightly injured a workman. Damage, \$20,000.

Halifax, N. B.—Vern W. Redmond, 50, died recently after an illness of seven months. He was a partner with his father in the business of G. A. Redmond & Son, the firm active in the distribution of flour and feed thru the eastern provinces and also for export. Surviving are his father, one brother in the Royal Canadian Air Force, and a sister.—W. McN.

Ottawa, Ont.—The Canadian feeds administrator has ruled that grain shipped out of government reserve stocks in Ontario must be invoiced to buyers at the following prices: No. 4 wheat, \$1.33125, No. 5 wheat, \$1.28125, No. 6 wheat, \$1.24125; oats, 63.125c, and barley 79.875c. All prices delivered Ontario points which take a 25c rate from Fort William. These quotations are, of course, less freight subsidy of \$4.50 ton and the drawback of 25c a bushel on wheat.

Winnipeg, Man.—Serious loss from farm stored grain has occurred in some sections of western Canada caused by insects, mites, green weed seeds, leaks, and seepage, as well as poor ventilation, and the Dominion Department of Agriculture is warning farmers to take every precaution to protect their grain from further damage. Producers are urged to examine their stocks, clean the grain, and transfer it to other bins during cold spells to minimize the danger of further losses.

## COLORADO

Holyoke, Colo.—The Holyoke Co-op. Ass'n reported 1943 was the most profitable year in its history. Mgr. L. L. Yowell announced \$40,548.16 were realized in profits. The elevator did by far the largest volume of business, the net profit reported being \$40,549.16; the mill business showed a profit of \$4,840.52. The elevator business showed more than 100 per cent increase in cash business compared to 1942.

## ILLINOIS

Roanoke, Ill.—The Eureka Milling Co. is building a large metal tank at its local plant.

Morton, Ill.—Milton Rich has succeeded H. A. Gunther as manager of the Farmers Co-operative Grain & Coal Co. elevator.

Mason City, Ill.—John Squire is new manager of the Mason City Milling Co., succeeding Vernon Warren who will enter the armed forces soon.

Hull, Ill.—Clarence Shue, manager of the Hull Elvtr. Co. elevator, has successfully passed his physical examination and will enter the army soon.

Colusa, Ill.—Fred Swanson, 59, manager of the Co-op. Farmers Elvtr. Co. elevator, died Feb. 21, after several days' illness of influenza and complications.

Jonesboro, Ill.—Wright Produce has purchased the A. J. Halterman Feed & Produce business and will handle a full line of feeds. A. S. Wright is manager.

Effingham, Ill.—Frank Field has opened a feed, produce and cream store here.—P. J. P.

Decatur, Ill.—On March 11 we opened an office here under management of Mr. E. E. Rice.—Stotler Grain Co.

Decatur, Ill.—One of the new "Stoy" flour package lines, part of the recent \$500,000 expansion program of the A. E. Staley Mfg. Co., went into operation in February.—P. J. P.

White Hall, Ill.—Dividend checks amounting to more than \$6,000 were distributed at the recent annual meeting of the White Hall Co-op. Elevator. R. L. Davis is manager.—P. J. P.

Vandalia, Ill.—Norman Michel, who has been managing the Wides Feed & Hatchery store, has leased the feed store from the Wides Oil Co. and will have full management of the business.

Altona, Ill.—George Kroll has sold his local feed mill and elevator, which he has personally operated for the past several months, to the Farmers Elvtr. Co., who took over the business March 1.

Galva, Ill.—George Kroll, who has been operating his elevator and feed mill at Altona during recent months, has sold the business and returned to the Galva mill, which is operated jointly by himself and Blaine Kiddoo.

Mira (Urbana p.o.), Ill.—Harold A. Silver and John A. Silver, operators of the Silver Bros. elevator, recently filed a bill of interpleader in the circuit court against Charles H. and Jessie Meyer and John S. Douglas. The complaint sets forth that Silver Bros. purchased corn to the value of \$684.78 from John S. Douglas, tenant on the Meyer farm, and a dispute came as to whom to pay the money. The court is asked to make the decision.—P. J. P.

Savoy, Ill.—The Savoy Grain & Coal Co. declared a patronage dividend of \$19,000 at its recent 40th anniversary meeting. It was the largest dividend in the company's history. The 194,766 bus. of soybeans sold thru the mill in 1943 proved the most lucrative crop, bringing in \$12,931 profit. Corn ranked second, the 404,534 bus. netting \$12,048. A total of 626,805 bus. of grain was handled, J. W. Jordan, mgr., reported. Merchandise business totaled \$98,196. Net profits were \$26,448.—P. J. P.

Champaign, Ill.—Plans for the silver jubilee conference of the American Soybean Ass'n at the U. I. college of agriculture next September are in preliminary stages, Joe E. Johnson, president of the association stated. But every soybean grower in the nation will be invited to attend the conference, he said, irrespective of membership in the association. The conference will emphasize the educational theme, improving methods and techniques of production. An array of specialists, manufacturers, and exhibitors will be the largest in history, he stated.

Ladd, Ill.—The Ladd Elvtr. Co., with elevators here and at LaSalle, in its fifth annual report recently issued announced an annual gain for 1943 of \$9,792.18; income tax, \$2,715.48 and dividend, \$1,050. At the local elevator a total of 204,656 bus. of grain were purchased: corn, 171,259 bus.; oats, 27,268 bus.; beans, 5,756 bus.; wheat, 373 bus.; at LaSalle, total of 263,935 bus., as follows: corn, 202,991; oats, 44,600; beans, 16,031; wheat, 313 bus. Expense of handling, at Ladd, \$5,454.11; at LaSalle \$5,510.73. A. E. Foster is local manager; Oreste Pini is manager of the LaSalle elevator.



Irving, Ill.—Drexel Neisler, farmer, has leased the local feed store from Macon Toberman and Frank Ware, taking charge March 1. Percy Voaden of Hillsboro will be manager, assisted by Wilmer Lorts. Mr. Neisler will continue to buy live stock and will devote his time to his farm. The new company will carry a full line of feeds, grain, seeds, salt, fencing, and will buy grains.

Alhambra, Ill.—The Alhambra Co-operative Elvtr. Co. is planning to install equipment for processing soybeans, Scott Apple, manager, stated. Federal authorities have granted permission for the purchase of machinery and equipment. A decision on an investment of approximately \$50,000 may be reached at the association's meeting in March. Daily capacity of the plant would be between 800 and 900 bus. daily.

Mattoon, Ill.—Allied Mills, Inc., held its annual district dinner meeting here in the Hotel U. S. Grant recently with 50 persons in attendance. R. O. Shaver, local company agent, presided at the meeting. E. D. Griffin of Chicago, assistant sales manager of the firm, spoke on the subject, "Feed in 1944"; I. E. Harrod of Decatur, district manager, spoke on the subject, "Post-War Feeding Problems."—P. J. P.

Millstadt, Ill.—The grain elevator of the Millstadt Milling Co. will be rebuilt. The milling company also will put a freight elevator in its produce building and erect a loading dock on the east side of the structure. Harvey Baltz, superintendent at the plant, said that plans and papers for the company's proposed food locker plant are in the hands of the St. Louis office of the W.P.B. The locker plant will be built in the cooper shop building adjoining the feed mill.

Bloomington, Ill.—The Gerling Elevator leased and occupied by the F. S. & W. Cob Products at East Front and Robinson Sts. burned early the morning of March 14. It was the second time in two months that flames wiped out the corn cob processing company's business. The first blaze occurred Jan. 18 at the elevator on North Morris Ave. The loss in the first fire was estimated at \$30,000. O. Lloyd Welsh of the F. S. & W. Cob Products Co., said three electric motors were destroyed in the recent fire, and the special cob cutter-grinder was badly damaged. A new rotary screen was being installed. A new shaker mill was scheduled to be installed but it arrived a day too late to be in the fire. The company had shipped three carloads of ground cobs (70 tons) before the last fire. The company's loss is estimated at \$2,000; H. F. Gerling, elevator owner, estimated his loss at \$8,000, partially insured. Mr. Welsh said plans for continuing the business were uncertain. He said every possible precaution had been taken and the whole plant inspected the evening before the fire. Nobody seems to know what started this fire. Can you tell?

Carrollton, Ill.—The Carrollton Farmers Elvtr. Co. observed its 25th anniversary at its recent annual meeting. Programs were presented in the morning and afternoon with banquets at noon served at the Baptist church, the Methodist church and the Knights of Columbus hall, 200 persons being served at each place. Floyd Howard, Sr., is manager of the elevator.

Wenona, Ill.—Forty grain dealers of Central Illinois met at the Hotel Stanton recently, when new O.P.A. regulations were explained by Miss Bonham of the Peoria O.P.A. office. The box-car shortage also was discussed, Mr. Wilson, I.C. distributor of Clinton, being present and presenting the railroad's side of the issue. Lawrence Farlow, sec'y of the Farmers Grain Dealers Ass'n of Illinois, and W. E. Culbertson, sec'y of the Illinois Grain Dealers Ass'n, were present and gave short talks.

#### CHICAGO NOTES

New members recently enrolled in the Chicago Board of Trade include Ray C. Feuerhaken, Hollander & Feuerhaken, and Edwin J. Kuh, Jr., both of Chicago.

Open accounts in oats and barley futures for May delivery are being reported to the business conduct committee of the Board of Trade, which has become interested since the open interest is large and contract stocks are small.

The Ass'n of Grain Commission Merchants held its annual meeting and dinner Mar. 21 at the University Club. Elected to the board of directors are Reuben Thorson, Harry C. Schaack and Harvey S. Williams. Officers will be chosen by the directors.

John W. Cripe has been appointed to the newly created post of field sales manager for Arcady Farms Milling Co. Jay Dusek has been named to the position of advertising manager for the company. Mr. Cripe has been with the company for four years as territory representative in Illinois and divisional manager. Mr. Dusek has been in the advertising department of the company for four years. He will direct the company's dog food and commercial feed advertising activities.

At a recent meeting of the Chicago Chapter of the Grain Elevator Superintendents, Parke W. Burrows, general manager of the Seedburo Equipment Co., Chicago, talked on "Moisture Testers." At the start of his talk, Mr. Burrows passed around a sample of corn and asked each man to guess the moisture content. He pointed out that many years ago, before grading regulations went into effect, it was the commonplace thing to test grain either by the "bite test" or by sticking a fingernail into it. By having the men make this test, he showed how easy it was to make a mistake. The correct moisture of the sample was 21.03 and the guesses ranged from 17% up to 25%. Harry Hanson of the Glidden Co. came nearest by guessing 21.6%. Mr. D'Onofrio second and Bill Gassler last.

Faroll Bros., commodity and security brokers, will be dissolved at the close of business March 31. The business will be continued without interruption by a new partnership, Faroll & Co., which will begin operation April 1. Barnett Faroll and other Chicago partners of the present firm will be members of the new partnership which will operate the existing Illinois and Iowa offices.

#### INDIANA

Bloomington, Ind.—The Bloomington Milling Co. recently sustained a small fire loss, originating in the office flue.

Royal Center, Ind.—The Farmers Co-operative Co. recently voted to sell the elevator to the Cass County Farm Bureau Co-operative Ass'n.

Richmond, Ind.—Young's Feed Store is contemplating installation of a 20-ton 34x10 ft. deck scale, equipped with full capacity direct reading dial.

Evansville, Ind.—David M. Nation, 62, supervisor of grain elevators at Igleheart Bros., Inc., died recently, in the Marine Hospital following a two weeks' illness.

Valparaiso, Ind.—The northern Indiana district feed dealers held a meeting at Hotel Lembke recently, where feed trade problems were discussed followed by a banquet.

LaGrange, Ind.—The LaGrange County Farm Bureau elevator is undergoing considerable remodeling of building and machinery to permit greater speed in handling ear corn.—A. E. L.

Waterloo, Ind.—The Gratz Grain & Milling Co. is installing a new corn dump, sheller, cleaner, and elevator leg. Electric power will be installed which will include ten totally inclosed motors.—A. E. L.

Plainfield, Ill.—Milton T. Sonntag, manager of the Plainfield Grain Co., has announced his candidacy for the election at the primaries April 11, as alternate delegate to the Republican National Convention to be held in Chicago this June.

Lynn, Ind.—The partnership between George H. Wood and Raymond C. Carman, operating as Lynn Elvtr. & Supply Co., has been dissolved, George H. Wood to continue the business under the firm name of Lynn Elvtr. & Supply Co.

Wolcottville, Ind.—M. G. Pierce after 26 years in the grain, feed and seed business, operating as the Wolcott Elvtr. Co., because of failing health has sold his elevator and stock to Irvin Shultz of LaGrange, who will operate as the Wolcottville Grain Co.

North Liberty, Ind.—Burglars broke into the office of the North Liberty Elevator the night of March 1. The safe was opened, but no money was found there since it is the established custom of Dave Crutchfield not to leave money in the safe over night.

Marion, Ind.—The grain and feed dealers in Grant County have formed a local organization and will hold frequent meetings to discuss their problems. Walter Lavengood, Swayzee, is chairman, and Harry Wilcox, Marion, is sec'y. The group held its first regular meeting on March 12.

Mexico, Ind.—Lowell Knauff, manager of the Mexico Elvtr. Co., reported total sales for the year 1943 for the company were \$190,834.97, with total operating expense of \$14,720.40, including taxes. Mr. Knauff recently purchased the Elmer Neff property and will move his family there.

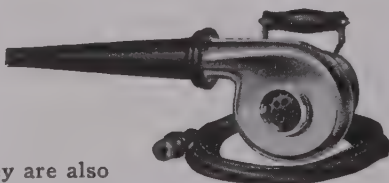
Oaktown, Ind.—A group of local business and professional men recently negotiated with the Farm Bureau of Knox County in regard to establishing a soybean plant here. The com'te in charge of arrangements recently held a meeting here and arranged to raise the necessary amount to guarantee the building of the plant.

## SEEDBURO BLOWERS

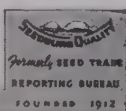
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Pennville, Ind.—The Pennville Milling Co., formerly owned by D. W. Bender and Mrs. Affe Engeler, has been sold to Harry Cooper, McMillen Soya Co., Fort Wayne, Ind., and Walter David, Jackson, Mich. M. M. Fetters is the new manager. D. W. Bender, who started milling in 1882 in the Lewis Mills, Chester Co., Pa., is retiring at the age of 80 years.

Marion, Ind.—John Grogan of Ambia was re-elected president of the Indiana Farmers Grain Dealers Ass'n at the annual meeting held here Feb. 28. Other officers of the association are Walter S. Penrod, South Whitley, vice-pres., and William Woodfield, Lafayette, sec'y and treasurer. Barton Rees Pogue of Upland spoke at the banquet which closed the day's program.

#### INDIANAPOLIS LETTER

Arcady Farms Milling Co., Chicago, Ill., has been granted a charter to do business in Indiana.—P. J. P.

A will filed for probate recently disclosed that Edward D. Evans, president of the Evans Milling Co. who died Feb. 24, left an estate in excess of \$150,000. The will created a trust fund.

Lieut. Wm. J. Bradford, a son of Freeman Bradford, general manager of the Indianapolis Board of Trade, has been promoted to a captain. At present he is stationed at Ft. Custer, Mich.

Fred K. Sale, sec'y of the Indiana Grain & Feed Dealers Ass'n, and Mrs. Sale recently enjoyed a 10-day leave by Lieut. James W. Sale, who is located at Aberdeen Proving Ground, Md., in the Ordnance branch.

New members recently enrolled in the Indiana Grain & Feed Dealers Ass'n include the following: Belshaw Elvtr. Co., Belshaw; W. W. Means, Indianapolis; Milford Grain & Milling Co., Milford; E. D. VanCleave, Greencastle; Jones Coal & Feed Co., Eaton; Russellville Elevator, Milligan; Master Feed Store, Berne.—Fred K. Sale, sec'y.

## IOWA

Keokuk, Ia.—Fire, started by spontaneous combustion recently damaged the feed mill at the Hubinger Co. plant.

Plymouth, Ia.—C. A. Molsberry has retired as manager of the Farmers Co-op. Elevator, a position he held for more than 10 years.

Stratford, Ia.—Hugo Lehman has been re-elected manager of the Stratford Grain & Supply Co-op. elevator for the ensuing year.

Anamosa, Ia.—The Anamosa Farm Store has been opened for business, carrying a full line of Cargill feeds, with J. L. Gierhart as manager.

Kamrar, Ia.—The Farmers Elvtr. Co. at its recent annual meeting paid an 8 per cent dividend to stockholders. B. G. Sniffin has been manager of the elevator for 18 years.

Indianola, Ia.—H. C. Criswell, feed dealer, has purchased a building which he will use in addition to his present location, as a place for the storage of feeds, seeds and as a processing plant. He will take possession May 1.

Wellsburg, Ia.—A new boot and tank pit has been installed in the Potgeter Grain Co. elevator, the George Todd Const. Co. doing the work. The elevator was closed for several days while the improvements were being made.

Aspinwall, Ia.—The Aspinwall Co-op. Co., Inc., has been organized to handle grain, lumber, oil, coal, feeds, seeds, hardware, and other products. Hubert Lamp is president, Clarence Stammer, vice-pres., and William Hanson, sec'y-treas.

Elkhorn, Ia.—The local elevator operated by the Harlan Rendering Co. was damaged by fire to the extent of about \$3,000. The fire started in the office and rapidly spread to the elevator. The leg was burned out and the top burned; the motors and loading scale were damaged.

Goodell, Ia.—D. M. Conlan of Newton, Ia., formerly a resident here when he owned and operated the Goodell Elevator for several years and also served as mayor of the town, died at his home Mar. 5, after a day's illness as the result of a stroke.

Kensett, Ia.—Ed Mellem, formerly of Grundy Center, Ia., has purchased the A. A. Thompto & Son, Inc., elevator and has assumed charge of the business. He will do custom grinding, feed mixing and oat hulling in addition to the regular grain buying and retail coal business.

Eldora, Ia.—Charles Harber recently sold the Eldora Feed Mill to Delapp & Co., Waseca, Minn., possession given Mar. 1. John Pierson has been placed in charge of the business as manager, and will be assisted for a time by Mr. Harber, who had owned and operated the mill since 1929.

Bode, Ia.—T. N. Pederson was elected president and A. W. Gray re-named manager of the Farmers Elevator at the recent annual meeting. The year 1943 was the biggest year in the history of the elevator. March 1 the firm began the pasteurization of milk and took over the city distribution of milk.

Rossie, Ia.—Tech. Sgt. Arthur M. Anderson, son of Arthur L. Anderson who owns and operates the local elevator, was recently awarded the Purple Heart in Italy. He is in combat now in Italy. Before his army career he helped his Dad in the elevator.—Art Torkelson with Lamson Bros. & Co.

Atlantic, Ia.—Don R. Jorgensen of Des Moines, formerly manager of the grain and feed department of the Inland Manufacturing Co. at Des Moines, has been named co-manager with Howard Beadle of the Atlantic Mill & Elvtr. Co. Mr. Jorgensen has been engaged in the feed business for 15 years.

Laurel, Ia.—R. J. McCleery passed away in Los Angeles, Calif., and was buried here on March 12. Several years ago he owned and operated a grain business here; later traveled the Iowa territory for a St. Louis grain firm and his last connection was operating a cafe at Columbus Jct., Ia.—Art Torkelson.

Clarion, Ia.—The Clarion Farmers Elvtr. Co. held its annual meeting Mar. 14 when Mgr. J. S. (Sam) Stewart read his report and showed earnings of \$39,255.26 for the past year. All directors were re-elected and dividends were passed out to stockholders. The board of directors held its meeting March 18 to elect officers for the coming year.—A. G. T.

Blue Grass, Ia.—Edward Grau, who recently purchased the Blue Grass Mill from Ott Schroeder, has reopened the place for business. The mill has been completely overhauled and re-modeled and is ready to do custom grinding. A complete line of commercial feeds will be handled also. Mr. Grau was employed for 17 years at the Farmers Co-op. Elevator at Walcott.

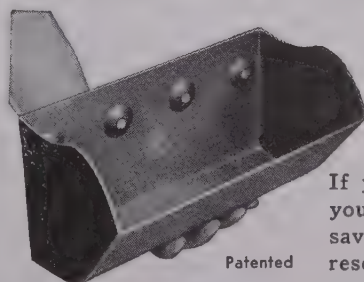
Sac City, Ia.—Oscar Heline, president of the Iowa Farmers Grain Dealers Ass'n and a member of the Farm Credit Board of Omaha, gave a talk on the subject, "Agriculture in War Torn England" recently at the high school auditorium. Mr. Heline recently returned from a 60-day tour of England, much of his time there being spent in discussing the agricultural situation with English farmers.

Hudson, Ia.—Howard Roach, vice-pres. of the J. Roach Sons plant at Plainfield, was the first of a series of speakers who will address the Hudson Commercial Club on post-war themes. Mr. Roach, at the March meeting, gave his views on the possibilities of a soybean mill for Hudson. He told of the new experimental solvent type soybean oil extraction plant his company is constructing at Plainfield in co-operation with Iowa State College. Mr. Roach also is president of the Iowa Farm Managers Ass'n.

Fairbanks, Ia.—The new R. S. Bentley feed mill will be ready for operation in about a month, replacing the one that burned in August, 1943. The main building formerly housed a bank and was purchased last October by Mr. Bentley. The grain elevator is 57 ft. high and has a storage capacity of 6,000 bus. A building 35x40 ft. in size back of the mill will house the scale, and customers can drive in while loading or unloading grain. A modern oat huller has been purchased. The entire plant will be electrically equipped.

Odebolt, Ia.—An estimated 30 million pounds of popcorn are being held in cribs and elevators in this and Schaller areas in protest to a \$3.68 ceiling price. Processors here and at Schaller reported that virtually no corn has been delivered to them for weeks. The O.P.A. ceiling price of \$3.68 a hundred pounds for corn-on-the-cob was set last Dec. 24. During the summer and fall the farmers had been getting as much as \$7.75 a hundred for the 1942 crop. The processors claim that popcorn purchased at a much higher price than the ceiling is handled at a loss.

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## KENTUCKY

Fort Dodge, Ia.—A. M. Lyders, owner of the Farmers Feed Mill and the Fort Dodge Flour & Feed Co., has sold the two firms to the farm service division of General Mills, Inc., who has taken possession. The transfer involved the feed mill where stock feed was manufactured and the wholesale store outlet. Mr. Lyders has leased the three buildings which house the Farmers Feed Mill to General Mills, Inc.

Rolfe, Ia.—H. I. Wickre, for the past four years manager of the Des Moines plant of the Russell-Miller Milling Co., has purchased a controlling interest in the Climax Mfg. Co. and will enter the feed manufacturing business for himself. He and his family moved here Mar. 15. Mr. Wickre was associated with the Russell-Miller Milling Co. for 15 years, having previously managed their plant at Aberdeen, S. D.

Estherville, Ia.—Elmer O. Jensen was seriously injured and Magnus Omundson was bruised when a pile of filled sacks of bran toppled on them at the Golden Sun Milling Co. warehouse the evening of March 14. The men, employees of the company, were loading sacks of bran from the warehouse on a truck. While taking sacks from the lower tier, the adjoining tier of bags was left without adequate support, and about fifty of the 100-lb. bags came toppling down upon the men. Omundson was struck on the head by one bag, but Jensen was buried under them, pinned to the cement floor. Calls for help brought the mill force running, and the man was freed. Both men were removed by ambulance to the hospital where ex-rays revealed the third lumbar vertebra of Jensen's back was crushed. He will be confined to the hospital for three or four months.

## KANSAS

Hutchinson, Kan.—The William Kelley Milling Co. plant sustained a small amount of damage from recent high winds.

Quenemo, Kan.—G. W. Wilson and G. K. Wilson, operating as Wilson Bros., reported a small fire damage sustained on March 2.

Great Bend, Kan.—The Walnut Creek Milling Co. recently sustained a small fire loss caused by a sticking scraper igniting roll housing.

Mankato, Kan.—Bliss Kirkpatrick is the new manager of the two elevators for the Mankato Grain Co., succeeding Paul Reboul, who has gone to Red Cloud, Neb.

Wellington, Kan.—Rod Cartmill, who has been associated with Wolcott & Lincoln for many years, has succeeded Price Feuquay as the company's local manager.

Abilene, Kan.—The Abilene Alfalfa Mill, Inc., has been granted a state charter to operate a general milling, elevator and feed business here; capitalized at \$75,000.—P. J. P.

Blue Mound, Kan.—K. H. Lalman has purchased the B. E. Blaker Lumber & Grain Co. lots from which all buildings have been removed except the office building.

Hutchinson, Kan.—George E. Gano, president of the George E. Gano Grain Co., has resigned as a member of the Kansas Industrial Development Corp., a post he held since its formation several years ago.

Valley Center, Kan.—The Farmers Union Co-op. Mercantile & Elevator Co. business was sold to E. Carl Jones, who has been manager for the Company for several years. He will continue the business as in the past.

Clay Center, Kan.—Carl Steele, who recently resigned as superintendent for the Arnold Milling Co. at Sterling, Kan., has accepted the position with the Shellabarger Mills of Salina as general superintendent for the Junction City Milling Co. and the Mid-Kansas Milling Co. here, taking up his new duties here about March 15. Mr. Steele had been superintendent for the Arnold Milling Co. for the past 20 years.

Garrard, Ky.—Lloyd H. Moore has installed a new grain cleaner in the Garrard Mills.

Russellville, Ky.—The McCarley & Richardson elevator was damaged slightly by recent high winds.

Trenton, Ky.—The elevator of the Trenton Seed Co. sustained a small amount of damage on Mar. 4 from high winds.

Frankfort, Ky.—A bill requiring that all weighing machines, or devices used in tobacco and grain warehouses within the state of Kentucky, along with public stockyards, be inspected at regular intervals by state inspectors, recently passed the lower house of the Kentucky General Assembly. The bill has no opposition.—A. W. W.

Louisville, Ky.—Two flour bills before the Kentucky Legislature include the flour enrichment bill, under which it is planned to enact a state law to bolster the Federal regulations; while the other bill for uniform flour packages, also backing war time emergency weights, has been passed by both houses and sent to the Governor for his signature. Millers were behind the package weights bill, which provides for uniform packaging of 100, 50, 25, 10, 5 and 2 pound flour sacks, instead of the old barrel divisional basis, which probably goes back to the earliest days of the milling business. The enrichment bill has gotten as far as the Senate Rules Committee, after passage in the House, but whether it will get up in time for passage is anyone's guess, as there is a lot of wrangling at Frankfort.—A. W. W.

## MICHIGAN

Lapeer, Mich.—The Lapeer Grain Co. recently installed a pneumatic elevator at its elevator.

Eagle, Mich.—The office of the Schwab Elevator Co. was destroyed by fire recently. The elevator, a few feet distant, was saved.

Lowell, Mich.—The King Milling Co. plans to start construction of its flour mill in the near future, the new structure to take the place of the plant that burned Mar. 7, 1943.

Imlay City, Mich.—The Thumb district of the Michigan Elevator Exchange held a meeting and dinner at the Hi-Speed restaurant recently, the managers of the bean and grain elevators meeting to discuss a few points relative to the grain and bean situation for the coming year.

Cadmus, Mich.—The Cadmus Coal & Grain Co., a co-operative concern, has been purchased by interests connected with the Adrian (Mich.) Grain Co., and will be operated in conjunction with that business. Earl Philo, a former employee, will act as manager, and after extensive repairs are made the company will engage in a general elevator business. The elevator has a storage capacity of about 9,000 bus. of grain.

Grand Rapids, Mich.—Frank F. Watson, 90, widely known in earlier days as a leader in the feed and flour business here, died recently, in Bradenton, Fla. He was founder in 1905 of the Watson & Higgins Milling Co., of which he was president from its organization in 1904 until a few years ago. He retired from active full-time participation in the business in 1917. He entered the grain and milling business when a young man, entering a partnership later with Marcus A. Frost in the Watson & Frost flour and feed business. The company's mill burned, was rebuilt, and damaged later by floods in 1904.

Battle Creek, Mich.—Fred Zinn of A. K. Zinn & Co., feed manufacturers, working alone on a volunteer mission in sleuthing about Africa, Sicily and Italy, locating the last traces of airmen lost in action. In a recent report of his activities it was said "he has no official status for his mission, no transportation except what he begs or borrows, and no assistants." But no clew, however small, is disregarded in his search for facts to clear up the record of a missing airman. During the last war, in 1915 he joined the French Foreign Legion, worked up from buck private to sergeant, received the Croix de Guerre, was wounded at Champagne, listed as missing in action but finally rejoined his outfit. When the U. S. soldiers were arriving in Europe, he transferred to the Lafayette Escadrille as a captain, served as aerial machine gunner and observer, was picked by Lieut. Billy Mitchell to organize aerial photo work, and then was placed in charge of assigning American flying personnel.

## MINNESOTA

Glyndon, Minn.—The Leslie Welter warehouse was damaged slightly by recent high winds.

Willmar, Minn.—Lt. Ralph Evinger, 24, former manager of the International Milling Co. office here, prior to his entry into the Armed Forces, crashed to his death in a bomber at March Field, Calif., on Feb. 13.

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Litchfield, Minn.—William Worin of Alden, Minn., is planning to build an alfalfa mill here.—L. L. B.

Lake Crystal, Minn.—J. C. Baker, 65, operator of a feed mill here for the past 34 years, died of a heart attack Feb. 28.

Rush City, Minn.—Almer Halvorson, formerly of St. James, Minn., is general manager for the local Co-op. service station, store and feed mill.

Baudette, Minn.—Corp. Earl Bitzer, formerly manager of the Northern Farmers Co-op. Exchange, is now overseas with Company B of the 37th Engineers.

Nassau, Minn.—Herbert Struck has been appointed manager of the Farmers Co-op. Elevator, succeeding Howard Wechsler who resigned. K. C. Blough is second man.

Moorhead, Minn.—Howard Wechsler, manager of the Farmers Co-op. Elevator at Nassau, Minn., for the past sixteen years, is new manager of the Moorhead Farmers Elvtr Co. elevator.

New Ulm, Minn.—J. F. Armstrong, former sales manager, Eagle Roller Mill Co., retired, has sold his home here and with Mrs. Armstrong is motoring to California to reside permanently.

St. Paul, Minn.—The Minnesota legislature has appropriated \$40,000 for the governor's contingent fund to pay overtime to employees of the state's grain inspection department, necessitated by the heavy movement of grain.

Faribault, Minn.—The Commander Elvtr. Co. entertained at a farmers' party in Ochs Hall the evening of Feb. 29. There was moving pictures, short discussions on feeds and seeds, a culling demonstration, and, in closing, a free lunch. The company held a similar party at Morristown the evening of March 1.—P. J. P.

Blackduck, Minn.—The Blackduck Feed store, owned and operated here for a number of years by Floyd Sipes, has been purchased by two Bemidji men, Henry Carlson and Clarence Travis. The deal includes the real estate and all of the equipment in the establishment. Mr. Sipes was forced to sell due to the fact that he is leaving for naval service in the near future.

Roseland, Minn.—Norman Arildsen, Sebeka, assistant manager of the Victoria Elvtr. Co. elevator, was warming some soybeans on the office stove when fire broke out. A general alarm was sounded and practically every resident of the town responded with buckets, carrying water from the elevator's well. The efficient work of the bucket brigade is credited with saving the elevator from destruction. E. A. Power, manager, is ill in a hospital.

Fergus Falls, Minn.—Fred P. Wheeler of Minneapolis and W. M. Hommerding have purchased control of the Red River Milling Co. Mr. Hommerding will have general supervision of the milling business. E. R. Crandall will remain in charge as local manager, and the present personnel will be retained. Mr. Hommerding has had years of experience in the milling and grain business. He and Mr. Wheeler at present operate a 350,000-bu. elevator at Grandin, one of the largest elevators in the state.

Canby, Minn.—Improvements costing approximately \$3,000 are under way at the two elevators of the Canby Farmers Grain Co., Herman Gjovig, manager, announced. New equipment has been installed in elevator "A" which includes new elevator belt and cups, greatly speeding up the handling of grain. A new spout system and head have also been installed to distribute the grain to bins. At the "B" elevator the shed is being remodeled on the east side into a modern seed storehouse and a new leg is being installed to elevator grain cleaned for seed to storage bins.

#### MINNEAPOLIS LETTER

Daniel K. Whalen, 67, for 33 years superintendent of the Commander Elevator, died at his home in Saint Louis Park recently.

George M. Bresnahan, president and manager of the Casselton (N. D.) Elvtr. Co., has purchased a membership in the Minneapolis Chamber of Commerce.

Leo Dickerson, traveling representative in North Dakota for the Atwood-Larson Co., was seriously injured when struck by an automobile while crossing the street here. He is confined to St. Mary's Hospital with a broken pelvis.

The Minnesota A. A. A. Board was entertained by the Northwest Feed Manufacturers & Distributors Ass'n at a dinner meeting at the Nicollet Hotel Mar. 14. Charles Stickney, state chairman of the A. A. A., was speaker of the evening, discussing work of the agency.

George P. Case, 74, veteran Minneapolis grain man, a former president of Minneapolis Chamber of Commerce and former president of Johnson, Case & Hanson, Inc., grain brokers, died recently, after an illness of several weeks. He had been a member of the Chamber of Commerce for 43 years.

Charles A. Malmquist, 83, president and founder of C. A. Malmquist & Co., grain merchants, member of the Chamber of Commerce of Minneapolis since 1901, and a member of the Chicago Board of Trade, passed away as he slept the night of March 12. Before coming here he had been active in the grain business at Winthrop, Minn. Mr. Malmquist became affectionately known as "Judge" to his many friends in the grain trade following his appointment by Gov. John Lind as a member of the first State Board of Grain Appeals in 1899. Funeral services were held March 15 at Winthrop.

### MISSOURI

Sikeston, Mo.—E. H. Percy, 64, grain dealer, cotton gin operator and farmer, died recently.—P. J. P.

Monroe City, Mo.—James Joseph Elliott, 70, manager of the Farmers Elevator for the past 17 years, died March 17.—P. J. P.

St. Joseph, Mo.—O. W. Clark, former traffic manager of the Grain Belt Mills, died recently of a heart attack at his home in Kansas City.

St. Joseph, Mo.—W. G. Catron, Jr., recently was elected to membership in the St. Joseph Grain Exchange on transfer from Wallace M. Neil. Mr. Neil is now connected with a Kansas City grain firm, and was succeeded in the St. Joseph offices of Stanard-Tilton Division of Russell-Miller Milling Co. by Mr. Catron.

St. Louis, Mo.—New offices of the Grain & Feed Dealers National Ass'n are at 100 Merchants Exchange. When completely settled in the new quarters an "official" opening of the offices will be held which will be attended by top officers of the Ass'n. These officers will formally accept a gift of furniture for the new headquarters from friends throughout the nation on this occasion.

Mexico, Mo.—More than 170 business and professional men, farmers, and business women attended a "welcome dinner" recently at the Hoxsey Hotel at which Maurice Maze and his associates in the new M. F. A. soybean processing plant and feed mill were among the honor guests for the occasion. Mr. Maze in his short talk stated the M. F. A. is planning quite an extensive program; with present equipment the plant will be able to process a half million bushels of beans annually. He stated if they are able to make other contemplated repairs and improvements the local plant will be in a position to handle a million bushels annually. He stated extensive improvements are now being made both inside and outside of the plant formerly owned by W. W. Pollock. A. O. Gilbertson is assistant to Mr. Maze at the mill.

Mexico, Mo.—Fire destroyed two of the four buildings of the Missouri Farmers Ass'n's feed mill and soybean processing plant the night of Mar. 17, causing damage estimated at \$280,000. The blaze started in the top floor of the four-story brick office and manufacturing building. The property was purchased last year from W. W. Pollock. Maurice Maze, manager, stated he believes the plant will be rebuilt. The milling and office building contained \$10,000 of newly ground feed, which was destroyed. Approximately \$80,000 worth of new machinery recently installed by the ass'n in connection with an extensive remodeling program which is still underway, was lost. The electrical wiring for the plant was being installed, but the current had not been turned on. The plant is north of the Alton railroad right of way, and the Alton, in an attempt to save one freight car on a siding beside the plant, hooked six cars to an engine, but as the train was moving toward the stranded car, the tender went off the track and in the delay that followed while another engine was brought up to move the train, one car hooked to the crippled engine was destroyed and another damaged. Fire departments from four towns battled the blaze. The two buildings that burned were close together; two saved were at a distance.—P. J. P.

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Edina, Mo.—The old grain elevator on the O. K. Railroad tracks near the Edina depot, long owned by J. L. Cornelius, is being razed. It had not been used for many years except for occasional storage.

St. Louis, Mo.—The Lawrence (Kan.) Milling Co. has arranged a long-term lease with option to purchase, on the mill and elevator of the Baur Flour Mills Co. The lease became effective at once. For the present the mill will engage exclusively in production of alcohol grits. Plans are being made for doubling the present 1,200-sack capacity with intentions of later returning to flour production. Andrew Baur, president and principal stockholder of the Baur Flour Mills Co., will continue as local manager for the new operators, and also will continue in the flour business, distributing his long-established mill brands. The Lawrence Milling Co., now operating the Bowersock mill at Lawrence under lease, was organized in 1943. While it is not a subsidiary of the Kansas Milling Co., of Wichita, its stock is owned wholly by Ward Magill, David S. Jackman and their associates in that company.

#### KANSAS CITY LETTER

North Kansas City, Mo.—Frank S. Burson has transferred from the W. J. Small Co., Lawrence, Kan., to the local Consumers Co-op. Ass'n.

R. V. Millikan has been admitted to membership in the Kansas City Board of Trade, on transfer from George T. Carkner, deceased. The membership sold for \$2,100.

More than 50 mill workers responded to the request for blood donations to replenish the government blood bank following use of much of the blood to save lives of their fellow workers, burned in the recent explosion and fire at the Larabee Flour Mills plant in North Kansas City. They were the first of about 500 members of the Flour, Feed, Cereal, Seed House and Grain Elvtr. Workers Union, A.F.L., who volunteered to give a pint each.

Altho the sampling department of the Kansas City Board of Trade was discontinued Mar. 1, resamples for appeals are still available from either the Missouri or Kansas state inspection departments. A sample taken by one department will be divided, one part going to the other department and the average of the two tests being taken, by resolution of the directors of the Board. The total charge is \$2, of which 50c is for sampling and 75c to each state department for its grading.

Lt. Col. Francis J. FitzPatrick, who was in charge of the milling wheat merchandising division of the Simonds-Shields-Theis Grain Co. prior to his entrance into the Army Air Corps, enjoyed a week recently, with friends in the grain trade, on his first leave since entering the service two years ago. Colonel FitzPatrick is senior aide to Lt. Gen. George H. Brett, commanding general of the Caribbean Defense Command, which comprises the Panama Canal Dept. and the Antilles Dept., and is stationed at Quarry Heights, Canal Zone.

The annual statistical report for the year 1943 of the Kansas City Board of Trade recently issued is a complete and concise compilation of all facts pertaining to that Exchange. W. R. Scott, sec'y, has presented detailed reports of the year's business and assembled other important and informative information pertaining to the Exchange. The brochure with its attractive orange colored manila cover, will make a handy and valuable addition to grain trade libraries.

Ralston Purina Co. has started construction of its soybean processing plant in the Northeast industrial district of the city, the plant to have a capacity of 4,000 bus. of soybeans daily. It is expected to have the plant ready for operation by Oct. 1, in time to handle the 1944 crop. Four presses, each with a daily capacity of 1,000 bus., will be installed. Construction of the unit is on the old Kelly Mill Co. property which joins the Purina mill, recently purchased from the Kelly estate. Construction plans allow for the addition of two more presses as soon as they are available, Ray E. Rowland, vice-pres. in charge of production, stated. Processing of meal for use of other industries, possibly plastics, is seen as probable, in addition to production of meal for use of the Purina Co.

#### MONTANA

Fort Benton, Mont.—Fred Guy is new manager of the Fort Benton-Greely Elevator, succeeding Pat Campbell who has moved to Great Falls.

Hardin, Mont.—Tom Campbell, who raises more wheat than any other man in the world, is now a colonel in the U. S. army air forces. He is now home on leave.—F. K. H.

Fort Benton, Mont.—E. N. Colby recently resigned his position as manager of the Farmers Elvtr. & Trading Co., after 15 years' service, and has gone to Conrad to take charge of a Texaco service station. C. W. Morrow will look after the elevator business here until a new manager is appointed.

Lewiston, Mont.—David Edward Markham, grain buyer at the Farmers Elvtr. Co. for the past 14 years, died of a heart attack while at his work Feb. 28. Mr. Markham came to Fergus County in 1913, and was employed as elevator manager at several points over the county prior to associating himself with G. L. Friedlein at the Farmers Elevator.

Bozeman, Mont.—Several changes in the standard list of crop varieties recommended by Montana Seed Growers Ass'n were made at a recent meeting of the association's directors. Ralph D. Mercer, extension agronomist at Montana State college, advised. Dropped from the 1944 list were Montana 36 wheat and Trebi barley. Montana 36, a hard red winter wheat variety, is being eliminated because it is nearly identical to the Karmont variety in general appearance and performance.—F. K. H.

#### NEBRASKA

Barneston, Neb.—A new grinding and mixing unit has been installed at the local O. A. Cooper Co. elevator.

Omaha, Neb.—The building housing the Farmers Grain & Fuel Co. was damaged by fire on March 7.

Elm Creek, Neb.—H. T. Ingalls Sons is building an elevator, the W. H. Cramer Const. Co. having the contract.

Diller, Neb.—The O. A. Cooper Co. is adding an addition to its local elevator for a grinding and mixing unit.

Odell, Neb.—Grinding and mixing equipment and scratch feed unit has been installed at the O. A. Cooper Co. elevator.

Oakland, Neb.—The Holmquist Grain & Lumber Co. presented a watch to Gus Dose in recognition of his 30 years of service with the firm.

Ithaca, Neb.—Elmer Williamson, 66, local grain, implement and coal dealer, was found dead in bed of a heart attack March 5.—P. J. P.

Albion, Neb.—Jim Bunn suffered some severe bruises recently when a pile of lumber at the Albion Elvtr. & Lumber Co. yards tipped over onto him.

Lexington, Neb.—The Kjar Hay & Grain Co. is building a 20,000-bu. cribbed storage annex to its elevator. The W. H. Cramer Const. Co. has the contract.

Lincoln, Neb.—Floyd Chance, manager of the Salina Terminal Elvtr. Co. elevator at Enid, Okla., has been transferred here to represent the company's local grain interests.

Friend, Neb.—The B. C. Christopher Co. has contracted for erection of a concrete and steel elevator here to replace the one that burned recently. Ben Dillin is local manager.

Fremont, Neb.—Veldon Lewis is buying all the corn cobs he can get, grinding them for shipment to Memphis, Tenn., where they will be used in a rubber manufacturing process.

Lexington, Neb.—The Meyer Milling Co. is building a three story structure one mile east of here, to be used as a warehouse and office of the company, and to house two dehydrators.

Oakland, Neb.—Harold Holmquist of the Holmquist Grain & Lumber Co., was elected president of the Nebraska Lumber Merchants Ass'n at its recent annual meeting in Omaha.

Alvo, Neb.—John E. Turner, owner and manager of the John E. Turner elevator, recently entered the U. S. Veterans' Hospital at Lincoln to undergo an operation for correction of a hernia.

Humboldt, Neb.—The O. A. Cooper Co. has partially rebuilt its local feed mill and will completely rebuild later. Guy L. Cooper of the company reports flour mill and feed mill trade is active.

Fairbury, Neb.—The Fairbury Mills Co. is opening a feed and seed store in the former Lambert building. The new store will make possible better service to the mill's customers and will provide necessary storage space.

Beatrice, Neb.—Paul Guenther, employed at the Farmers Co-operative Elvtr. Co.'s plant, badly injured three fingers on his right hand when they were caught in a blower fan, necessitating amputation of the second finger.—P. J. P.

Omaha, Neb.—The annual meeting of the Nebraska Grain Improvement Ass'n was held here Mar. 21. The program for the meeting was built around reports from county agents and specialists from the college of agriculture. J. C. Swinbank is sec'y of the association.

Sutton, Neb.—The Co-op. Grain Co. at its recent annual meeting reported a profit of over \$10,000 for 1943, its annual statement showing an increase of nearly one-third in assets over 1942. Members voted to defer all dividends for the year, with the accumulated profits to be used in expansion and operation of the business.

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Elm Creek, Neb.—The Allied Co. will build a 56x108 ft. storage warehouse at its local plant. The structure will be used to store the company's alfalfa meal, used in its various feed mixing plants. The company recently added another dehydrating unit to the local plant.

Omaha, Neb.—Sam E. Hunt, Jr., has been named assistant manager for Cargill, Inc.'s local office, succeeding James Vaughn, who recently resigned to join the Colorado Milling & Elevator Co. Mr. Hunt has been stationed at Minneapolis in the company's barley merchandising department for the past year.

Minden, Neb.—Harold Yost of Harvard was employed as manager of the Farmers Co-operative Grain & Supply Co. at the board of directors' meeting March 1. He succeeds George Rasmussen, who resigned after ten years' service. Mr. Yost has been manager of the Farmers Elevator at Harvard for several years.

Table Rock, Neb.—A. F. Petrask, who has completed his 23rd year as manager of the Farmers Union Co-op. Ass'n elevator and store, was re-appointed for another year. Joe Lang was hired to work at the elevator and take care of the tank wagon. The association reported 1943 was one of the most successful years in its history.

Beatrice, Neb.—We have completely remodeled our two Beatrice elevators, and remodeled and enlarged the former feed mill of Black Bros. which we purchased in April, 1943. We have installed a new pellet mill, molasses equipment, scratch feed units and new mixing equipment for mash feeds and have greatly increased our storage space.—The O. A. Cooper Co.

Motala (Minden p.o.), Neb.—George Rasmussen, manager of the Farmers Co-operative Grain & Supply Co. of Minden, Harold Warp and J. R. McBride plan to construct a \$50,000 alfalfa mill and dehydrating plant here, in time to process the first cutting of alfalfa. The plant, the first of its kind to be built in the Tri-County area, will serve a 15-mile area in Kearney and Phelps Counties.

Columbus, Neb.—The Columbus Grain Co., managed by Gene Tredway, opened a feed and seed store here recently. The feed and seed service will continue at the elevator as before, the store opened to assure greater convenience to customers. One of the advantages of the new place is installation of all-weather loading facilities. Customers may drive in, load, and drive out without the necessity of parking.

Falls City, Neb.—Louis Ebel has obtained priorities and completed arrangements for installation of an alfalfa dehydrating plant here, to be opened in time for the first cutting of alfalfa. The plant will be able to handle the production of approximately 500 acres annually. The new equipment will be operated by the Ebel Alfalfa Co. which now operates an alfalfa meal plant here but so far has depended on sun-cured hay. LaVerne Cornford will be superintendent of the new plant.

Mitchell, Neb.—The local sugar factory has been tentatively chosen to be used to dehydrate the 1,300 carloads of potatoes that have been signed for this purpose by the C.C.C. The original goal set was 2,000 carloads of No. 2 potatoes, but it is understood that the potatoes already signed up will be processed, and that it is expected the additional cars will be available before the processing is completed. The dehydrated product will be used for alcohol and starch manufacture. The potatoes are being dehydrated here to facilitate in the shipping of the potatoes to points where they will be processed.

Scribner, Neb.—A meeting of representatives, including managers and directors, of the 10 farmers co-operative elevators operating in Dodge County was held at Community Hall recently, to discuss the present unsatisfactory plan whereby the W.F.A. allocates supplies of protein feeds to farmers and stock growers, claiming such supplies having been wholly insufficient to meet feeding requirements. John Havekost of Hooper was chairman of the meeting and A. H. Shultz served as sec'y. A committee was named composed of one officer from each Co-op in the county, to contact the W.F.A. thru the A.A.A. in an endeavor to remedy the situation.

Alliance, Neb.—The Alliance Safflower Co. has been formed, to function as a commercial group, working directly under the supervision of the Nebraska Chemurgy project for 1944 seed program. George Neuswanger was elected president, Hans Jagers, vice-pres., Carl Buechsenstein, treasurer, and John Dector, sec'y. This board will direct the affairs of the corporation, the 51 stockholders of which have subscribed and paid in cash for \$15,000 of the stock issue needed to finance the purchase of the safflower crop grown in 1944. Plans will be made at once to allocate the 6,000 lbs. of available India safflower seed to a few of the capable farmers of the Box Butte tableland, seeking varieties of soils and working out plans for several types of planting, cultivating, irrigation and other practices to determine the best methods for getting maximum yields.

## NEW ENGLAND

East Newport, Me.—Dow & Payne, Inc., sustained a heavy fire loss Feb. 25.

## NEW YORK

Dover Plains, N. Y.—The storage warehouse of A. L. Wathley was damaged by fire recently, caused by an over-heated stove.

Wolcott, N. Y.—An electric light bulb left burning all night at the Engleson & Van Liere plant came in contact with a wood partition and ignited the wood. The fire was discovered in time to prevent total loss. Unprotected light bulbs are dangerous in grain elevators.—H. H. H.

Poughkeepsie, N. Y.—Malcome R. Grahame, local feed and grain dealer, has purchased the Reynolds Elevator Co. property on Garden St., which he has leased since 1941. The elevator property over a long period was subsidiary of the William T. Reynolds & Co., which was dissolved in 1937.

Binghamton, N. Y.—Daily Mills, Inc., held at its recent annual sales meeting, March 1-3, was addressed by Elmer Wheeler, advertising and merchandising counsel, and Dr. Harry W. Titus, poultry nutrition specialist. An added celebration on opening day of the meeting was in honor of the birthday anniversary of the company president, W. H. Kieser.

Mt. Morris, N. Y.—Bryce Bros. produce and feed mill has been sold to George W. Haxton & Son, Inc., of Oakfield. Purchase includes the building and equipment. The new owners operate several such establishments throughout Western New York. Anthony Mulley, who has been employed by Bryce Bros. over a long period of years, has been appointed manager. Bryce Bros., under the direction of Geo. A. Bryce and the late Ray Bryce, carried on an extensive business for 25 years.

New York, N. Y.—The New York branch of Faroll Bros., here and Chicago, will continue in business as a new firm, Joseph Faroll & Co., after dissolution of Faroll Bros. March 31, beginning operation April 1. Joseph Faroll and Winfield H. Schweickart, now partners with Barnett Faroll and other Chicago partners, will continue in business as the new firm.

New York, N. Y.—Mayor La Guardia has announced that the city has insisted upon taking over five of the terminals, objecting to having them placed under any joint jurisdiction with the Port Authority. Frank C. Ferguson, chairman of the Port Authority, and Howard S. Cullman, vice-chairman, said no formal action can be taken in regard to the Gowanus Bay Grain terminal until the Legislature has approved the proposal. They said the Gowanus Bay elevator represents half the total grain handling capacity of the Port of New York. The decline of recent years they trace to the general falling off of the port's grain trade and to the fact that the terminal has been operated as a part of the State canal system rather than as a major port facility.

## NORTH DAKOTA

Josephine, N. D.—The Farmers Grain & Fuel Co. plant was damaged by fire on March 7.

McHenry, N. D.—Ed Alfsen, 72, North Dakota grain buyer for 48 years, died recently in a St. Paul hospital. He had been in poor health since last summer.

Dickinson, N. D.—P. N. Haag, "Pete" to his many friends in the grain trade, a representative of Hallet & Carey Co. in North Dakota, suffered a paralytic stroke recently and is confined to a hospital here.

Duane Siding (Ellendale p.o.), N. D.—The Ellendale Grain & Seed Co. recently sold its local elevator, known as the Empire Elevator, to John Bell of Ellendale, who will raze the structure and use part of the lumber for construction work on his farm.

Fargo, N. D.—Attention elevator managers! The I. C. C. has recommended certain demurrage increases that increase the demurrage charges after the fourth day on a car of grain as much as 100 per cent. While this order has not yet been given, warns the Farmers Grain Dealers Ass'n of North Dakota, it is understood that it is pending. It would be extremely unwise to unnecessarily delay any car of grain for almost any reason whatever.

Fargo, N. D.—New members recently enrolled in the Farmers Grain Dealers Ass'n of North Dakota include the following: E. N. Nelson Elevator, Lisbon; Sheldon Farmers Elevator Co., Sheldon; Coburn Elevator Co., Sheldon; Minot Farmers Co-op. Grain Ass'n, Minot; R. D. Johnson, Glenburn; Farmers Co-op. Ass'n, Cleveland; Tower City Grain Co., Tower City; Luverne Farmers Co-op. Elevator Co., Luverne; Karnak Farmers Elevator Co., Karnak; Bisbee Grain Co., Bisbee; O. J. Sundeen Elevator, Lakota; Rutland Farmers Co-op. Grain Co., Rutland; Wheatland Elevator, Bottineau; M. F. M. Grain Co., Aneta; Reynolds Grain Co., Reynolds; Roney Seed & Feed Co., Oakes; E. M. Levi, Elevator & Hdw., Zealand; W. F. Blum Ind. Elevator, Makoti; Verona Grain & Fuel Co., Verona; Adrian Equity Elevator Co., Adrian; Bowdon Grain Co., Bowdon; Gardner Farmers Elevator Co., Gardner; Farmers Grain & Seed Co., Barney; Sentinel Butte Farmers Elevator Co., Sentinel Butte; Emrick Grain Co., Emerick; Klindworth Seed Co., Fessenden; Farmers Union Elevator & Merc. Co., Falkirk.



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NEW YORK, N. Y.



Erie, N. D.—Bolmeier Bros. elevator No. 2 was badly damaged by fire Feb. 10 which was communicated to elevator No. 1, causing a small amount of damage to that structure.

## OHIO

Ada, O.—The Ada Farmers Exchange Co. elevator was slightly damaged by high winds on Feb. 22.

Toledo, O.—Raoul Levy, manager of the Continental Grain Co., has been elected to membership in the Toledo Board of Trade.

Hicksville, O.—Chas. C. Howenstine, 76, one of the founders and the first sec'y of the Hicksville Grain Co., recently was found dead in his chair at his home two miles southwest of here. He had been ill with asthma and heart trouble for some time.

Fredricktown, O.—Hubert W. Updike, 64, head of the firm of H. W. Updike & Sons, operators of elevators here, at Ankenytown and Centerburg, died Mar. 1 in Mercy Hospital, Mt. Vernon, following an operation for an intestinal obstruction.

Cincinnati, O.—Fire in the drying room of the Early & Daniel Co. plant the night of March 2, caused some damage. An accumulation of dust between pipes ignited starting the fire. Firemen worked some time removing the dust to extinguish the blaze. While the flames caused slight damage, smoke caused more.

Columbus, O.—New members recently enrolled in the Ohio Grain, Mill & Feed Dealers Ass'n, include the following firms: Buffalo Mills, Buffalo; Farm Bureau Co-op. Ass'n, Chillicothe; Croton Elevator, Croton; The Ceres Supply Co., Inc., Massillon; Moorhead Elevator, Leipsic; Archbold Seed & Feed Co., Archbold; Millersburg Equity Exchange, Millersburg; Spencer Elevator, Inc., Spencer; The Hardesty Milling Co., Dover; Champaign Grain & Feed Co., Mechanicsburg; M. H. Engle, Ft. Wayne, Ind.—W. W. Cummings, sec'y.

Toledo, O.—O. E. M. Keller of the Kasco Mills, Inc., has been named by Governor Bricker to serve on the Ohio Small Business Commission. A series of meetings have been arranged with at least one member of the 15-man commission being present at each meeting. Four of these meetings have been held. Others to follow are: Mar. 30, Lafayette Hotel, Marietta; Apr. 27, Secor Hotel, Toledo; May 25, Cambriana Hotel, Jackson; June 22, Rieger Hotel, Sandusky; July 20, Auditorium, Chamber of Commerce, Coshocton; Apr. 13, Pick-Ohio Hotel, Youngstown; May 11, Gibbons Hotel, Dayton; June 8, Cleveland, O.; July 6, Ft. Steuben Hotel, Steubenville. All meetings will be held from 10 a.m. to 12 noon and from 1:30 p.m. to 4:30 p.m. Grain and feed men should attend the meeting in their neighborhood, W. W. Cummings, sec'y of Ohio Grain, Mill & Feed Dealers Ass'n, urges.

Pittsburg, O.—Chalmer Stoltz has installed a new large size hammer mill, equipped with all latest improvements, and magnetic separator at his plant.

Warren, O.—L. M. Wadsworth, president of the Wadsworth Feed Co., died Mar. 10 in Florida where he had been spending the winter. The business, being incorporated, will continue as before. J. J. Mill is sec'y-treas.

Toledo, O.—Alfred E. Schultz, on leave of absence as sec'y of the Toledo Board of Trade, was a recent visitor on the Exchange while on furlough from the U. S. Navy. He has been given a rating as Yeoman third class.

## OKLAHOMA

Oklahoma City, Okla.—The Oklahoma Crop Improvement Ass'n is holding a meeting here Mar. 22 and 23.

Chickasha, Okla.—The Chickasha Milling Co. plant was badly damaged by recent high winds, a large loss reported.

Hydro, Okla.—Sid Thomas has been elected local manager of the Farmers Co-op. Elevator, recently consolidated with the Hinton Farmers Elevator Co., and Grover Hollis, Hinton, was made general manager. Mr. Thomas was elevator man for the same concern several years.

Alva, Okla.—Plans for the finance, construction and use of the proposed grain terminal elevator were detailed to a gathering of grain dealers and elevator operators around Perryton, Tex., panhandle wheat center at a meeting held in Perryton recently, by a com'tee from the Terminal company, including K. P. Aitken, Claude Nickell, Bill Stites, Morton Share and Joe Denner.

Enid, Okla.—Price Feuquay, formerly manager of Wolcott & Lincoln, Inc., plant at Wellington, and vice-pres. of the Wellington Terminal Elevator, recently accepted a position as local manager of the Salina Terminal Elvtr. Co., and will have charge of the company's million-bu. terminal elevator. Mr. Feuquay has purchased a home here and will move his family here about April 1.

Bristow, Okla.—Plans are being made for construction of the Hornay-Collins processing plant on a site adjoining the Frisco tracks on East Ninth Ave. Building and equipment for the modern plant will cost approximately \$25,000. An 85-ft. tower will top the feed mill. A permit from the W.P.B. to purchase materials for the mill has been issued and the construction work is to start soon. All machines in the plant will be individually driven so that only the needed equipment will be operated. The plant will be designed to handle all milling operations except the manufacture of wheat flour and by-products of wheat. The elevator will provide a market for all types of grain. Encouragement of production of sorghum types of grain will be emphasized. Management of the mill will be by an experienced feed and grain man.

El Reno, Okla.—Walter H. Schroeder of the Farmers' Mill & Grain Co. recently underwent a major operation, and is recovering in a local hospital.

Fargo, Okla.—The Farmers Co-operative Ass'n has been incorporated; capital stock, \$25,000; Hoel J. Hohweiler, H. H. Hininger, and J. Q. Adams.—P. J. P.

Shawnee, Okla.—The Shannon Feed Store has opened for business. Raymond Hays, former manager of the Shannon store in Oklahoma City, has been transferred here as manager. L. D. Shannon is owner of the store.

## PACIFIC NORTHWEST

Salem, Ore.—G. M. Slentz Feed & Seed Co. has filed articles of dissolution.—F. K. H.

Enumclaw, Wash.—The Gateway Feed Co. buildings, equipment, etc., have been sold to Fisher Flouring Co.

Boise, Ida.—Idaho Dehydrators, Inc., has been organized, to engage in a general dehydration and milling business.

Newberg, Ore.—Walter E. Mills, Salem, has been appointed manager of the Newberg Feed & Seed Co., succeeding W. T. McDonald.

Colfax, Wash.—The Colfax Grain Growers, Inc., recently elected E. H. West, assistant manager, to succeed D. W. Glasgow, resigned.

Chehalis, Wash.—General Mills, Inc., will shortly open a modern complete chick hatchery costing \$10,000. James H. Knowles is in charge.—F. K. H.

Gaston, Ore.—R. J. Bates has taken over the Gaston Feed Mill and is repairing the plant. William King will continue to be connected with the mill.

Diamond, Wash.—Hugh Huntley has taken down his loading platform, planning to construct a 50,000-bu. grain elevator this year, to cost approximately \$18,000.

Silverton, Ore.—Merlin Conrad has sold his feed and seed mill, his retail store and all equipment of Farmers Co-op. The new owners will take over April 3.—F. K. H.

Portland, Ore.—Oregon's livestock, dairy and poultry outlook, is improving with the delivery of some 200 tons of soybean meal. Upwards of 1200 tons of this product has been ordered by the state A. A. A.—F. K. H.

Notus, Ida.—The C. L. Haines feed mill was destroyed by fire on March 8. The Howard Pennington Feed Mill and the O. P. Pennington mill were damaged as a result of flames that spread from the burning Haines plant.

Salem, Ore.—At the annual meeting of Oregon Farmers Union the convention went on record as opposed to the administration subsidy program because program was not sound; that its operation was not in the interests of farmers and that it would result in further waste and extravagance.—F. K. H.

Cheney, Wash.—William F. Martin, who before entering the army was vice-president of the F. M. Martin Grain & Milling Co., has been promoted from first lieutenant to captain at the Spokane air depot where he is on duty as area civilian training officer. He is a son of former governor, Clarence D. Martin.

Seattle, Wash.—The house subcommittee on agriculture department appropriations was urged by Rep. Hal Holmes (Wash.) to expand to all Washington state its program for eradication of the barberry bush which spreads stem rust to wheat. It is noted the rust was bad in Whitman and Spokane counties.—F. K. H.

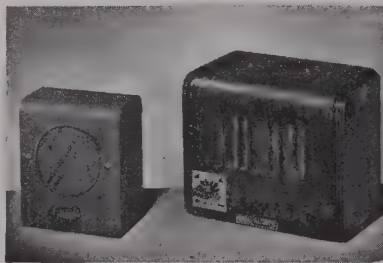
Mount Vernon, Wash.—L. H. Goodhue, president of the Skagit Grain & Seed Co., Inc., has been authorized by the W.P.B. to construct additional facilities adjoining the present warehouse. While plans call for a building 40x70 ft. in size, it is being built so that at the end of the war a much larger building program can be carried out. Construction of the building will start at once.

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Portland, Ore.—Penny cress weed, long the bane of Pacific Northwest wheat growers, may become valuable as a source of a substitute for linseed oil. Dr. Frank Hurley of the Reed College chemistry department credited the discovery to one of his graduates Paul C. Schrader, who found that the weed contains an oil possessing wetting and drying properties for a paint constituent.—F. K. H.

LaCrosse, Wash.—C. M. Cook, manager of the LaCrosse Grain Growers, Inc., has resigned after six years' service with the organization. Frank Schreck of Walla Walla has been appointed to succeed him. Mr. Schreck has had considerable experience in the grain business, having worked several years for the LaCrosse Grain Growers as bookkeeper and the past two years with a Walla Walla milling company.

Wilbur, Wash.—The Grain Growers Warehouse Co. has made application with government agencies for priorities for necessary materials to erect a 286,000-bu. elevator, to cost about \$85,000. It is hoped the request will be granted so that construction work can start at once. This third concrete elevator would give the company a total storage capacity of 650,000 bus. at the plant. Henry Georg, who designed the other large elevator that was built a few years ago, has been retained to design this new one.

## PENNSYLVANIA

York Haven, Pa.—Norman Blair is installing a new hammer mill.—H. N. V.

Hanover, Pa.—The Hanover Milling Co. recently installed a new molasses mixer.—H. N. V.

Myerstown, Pa.—Whitmoyer Laboratories has installed a V.-S. Diesel engine together with a 22 inch attrition mill and 2-ton mixer for mixing and grinding special formulas for poultry and animal feeds.—H. N. V.

Williamsport, Pa.—John Stahlnecker has purchased from Davis Worster, his partner, the latter's half interest in Locoming Mills, and now is sole owner. He plans to remodel the plant for increases capacity in feeds.—H. N. V.

Jersey Shore, Pa.—Pennsylvania Soybean Co-operative Ass'n recently built a 35,000-bu. bean storage elevator and has improved the plant's facilities by rebuilding the oil press and installing a new cleaner and new high speed elevators and conveyors.—H. N. V.

## SOUTH DAKOTA

Marvin, S. D.—John Heggie has leased and will operate the local grain elevator.

Montrose, S. D.—The Betts Grain Co. is having its elevator overhauled and making many improvements at the plant. Leo Garry is manager of the elevator.

Hanton, S. D.—The E. A. Brown Co., Inc., elevator was destroyed by fire March 11, with between 800 and 1,000 bus. of oats. N. F. Kranz is manager of the business.

Volga, S. D.—The west wing of the Geo. O. Cotton & Son elevator is being remodeled. New grain bins are being built and a grain cleaner will be installed. The T. E. Ibberson Co. has the contract.

Aberdeen, S. D.—Frank L. Kraft has joined the personnel of Cargill, Inc., his territory the southwestern part of North Dakota, and the northwestern part of South Dakota. Previously in the coal business, he spent many years calling on grain men in this territory.

## TENNESSEE

Covington, Tenn.—The Covington Feed Store opened for business recently with S. A. Foust of Ripley as manager. E. M. Hunt will continue to operate his grist mill and feed crusher, located in the rear of the building in which the new business is located.—P. J. P.

## TEXAS

Lockney, Tex.—The Denver Alfalfa Milling & Products Co. is building an alfalfa mill and warehouse here. The plant will be ready for operation by the opening of the alfalfa season, officials of the company stated. George T. Wilson of Plainview is district manager of the company.

Greenville, Tex.—Earle Humphreys, 12, being out of school on Saturday, Mar. 4, tried to turn Bagwell's feedmill into a playhouse and jumped into a bin of shelled corn, from which corn was being drawn. No one saw him disappear, but several hours later, a keen-eyed workman was shocked by the sight of a hand reaching up from the top of the grain. As soon as help arrived, a rope was attached to the hand and the body pulled up; but too late, Earle was smothered. Keep children out of your elevator.

## UTAH

Kamas, Utah.—The Kamas Valley Feed Co-operative plant has been completed and "open house" was celebrated at the plant followed by a mass meeting Feb. 24. Willis R. Dunkley of Logan, district supervisor for the farm security administration, was in charge of plans for the celebration. Representatives of Utah agricultural extension service, farm security administration, state department of vocational agriculture, Kansas Valley Feed Ass'n, county farm bureau and Hi-land Dairy Ass'n attended the meeting. George Q. Bateman, research professor of dairy husbandry at the Utah Agricultural Experiment station, was the principal speaker at the mass meeting. All plant machinery is installed and four bins with a capacity of 8,000 bus. are ready for use.

## WISCONSIN

Burlington, Wis.—A warehouse operated by the Rochester Feed Co. was destroyed by fire the night of March 11.

Menomonie, Wis.—E. O. Wright was re-elected president and general manager of the Wisconsin Milling Co. at the recent annual meeting.

Milwaukee, Wis.—The Collin Feed Co. has purchased the property of the Central Lumber Co. and will operate a coal and feed business in addition to its mill.—P. J. P.

Whitehall, Wis.—The Whitehall Mill & Power Co. recently installed a seed mill operated by a 5-h.p. motor, at its Main St. feed store. The mill cleans various grass seeds and grains.

Random Lake, Wis.—The new feed mill and mixer recently installed by the Random Lake Co-op. Ass'n, are in operation. The mill is equipped to grind corn on the cob as well as small seed grains.

Waunakee, Wis.—C. J. Schmidt has sold his elevator and coal business to the Dane County Farm Co-op. Supply, the new owners to take possession April 1. Mr. Schmidt has owned this business for the past 37 years.

Watertown, Wis.—The Rock River Consumers Co-op. recently installed a new pulverizer and two-ton mixer at its plant, greatly increasing the convenience for customers for custom mixed feeds, L. H. Bruce, manager announced.

The Federal Government today has one civilian employee for every two and one-half men in the armed services.—Senator H. F. Byrd.

The General Foods Corporation denies any purpose to corner the rye futures market. The company owns more than 5,000,000 bus. of rye futures. A spokesman for the company said Mar. 18: "General Foods is not a primary user of rye and will sell its holdings to the government or any other user who needs it. General Foods has no intention of contributing to an artificial shortage of rye."

# Receiving Books

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**Farmer's Deliveries.** A convenient form for recording loads of grain received from farmers. Tare weight is entered immediately under gross to facilitate subtraction. Two hundred pages of linen ledger paper, ruled 20 lines to a page, thus accommodating 4,000 loads. Well bound in cloth, with keratol back and corners. Order Form 380. Weight 2¾ lbs. Price \$2.75, plus postage.

**Receiving and Stock Book** for keeping a record of each kind of grain received in separate columns, so buyer may easily determine total amount of any grain on hand. Size 9¼x11½, 200 pages, with a capacity for 4000 loads. Well printed on linen ledger paper, bound in cloth with keratol back and corners. Order Form 321. Weight 2¾ lbs. Price \$2.75, plus postage.

**Grain Scale Book,** a combined Journal and Receiving book. Each man's grain is entered on his own page. Both debits and credits are posted to the ledger. Contains 252 numbered pages and 28 page index, size 10½x15½ inches, will accommodate 10,332 loads. Printed on linen ledger, bound in extra heavy black cloth covers, with keratol back and corners. Weight 5 lbs. Order Form 23. Price \$4.40, plus postage.

**Grain Receiving Register** is designed for recording the receipts of farmers' grain. Loads may be entered in consecutive order, or different sections of the book may be devoted to different kinds of grain. Book contains 200 pages of linen ledger paper, size 8½x14 inches, each of which is ruled for 41 entries, giving a total capacity of 8200 wagon loads. Well printed and substantially bound in full canvas. Weight 3 lbs. Order Form 12AA. Price \$2.80, plus postage.

**Duplicating Receiving Book,** designed to facilitate the recording of loads received from farmers. Book contains 225 leaves, size 12x12 inches with 33 lines each, perforated down the middle; the inside half of the leaf remains in the book, and the outer half with the same ruling printed on the reverse side, folds back over the inside half with carbon between. It may also be used by line agents in making daily reports. Check bound with canvas back, nine sheets of carbon. Weight 4½ lbs. Order Form 66. Price \$2.85, plus postage.

**Grain Receiving Ledger,** may be used first as a Stock Book by posting the receipts daily, weekly or monthly from some other portion of this book, or from any other scale book, giving a page to the grain handled; Second, as a patrons' ledger, by giving a full or half page to each patron; Third, pages may be used to enter each load of grain received in consecutive order under their respective headings. Contains 200 numbered pages with 44 lines to page, and a 28-page index, size 8½x13½, ruled with the usual column headings, including Debit and Credit columns. Printed on linen ledger paper and well bound in black cloth sides with keratol back and corners. Weight 2½ lbs. Order Form 43. Price \$3.30, plus postage.

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# Field Seeds

**Lyons, Neb.**—Ira Way has opened a seed store.

**Downey, Cal.**—Jos. A. Frazier has purchased the seed business and property of Willis Leach.

**Wayne City, Ill.**—J. F. Mateer has discontinued the seed business and sold the building occupied by his Wayne City Seed Co.

**Los Angeles, Cal.**—Several thousand dollars worth of seeds burned after an explosion in the warehouse of the Germain Seed & Plant Co.

**Anna, Ill.**—Jasper Williams of Harrisburg, Ill., has purchased the Vaughn Seed Store, J. W. Davidson, who managed the store for 24 years, taking charge of the Vaughn peony farm, east of Anna.

**Columbus, O.**—A cargo of garden seed valued at \$30,000 was burned the night of Mar. 16 in a truck collision at Portsmouth, O., the truck the property of R. F. Eithenberger of Columbus.

**Washington, D. C.**—The Bureau of Entomology has developed a club type of wheat resistant to the hessian fly, for the Pacific Coast; and a small amount of seed has been released to growers in California.

**Albany, Ore.**—The Buchanan-Cellers Grain Co., of McMinnville, has purchased the Albany Seed Co. and placed H. E. Hadley in charge. Wm. Vollstedt, founder of the business, will devote his time to his two farms.

**Stoneville, Miss.**—At the state experiment station in 1943 the hybrid corn test gave 65.9 bus. per acres for Funk's G717, 60.3 for Louisiana Hybrid 468, 58.8 for Tennessee Hybrid 15. An open pollinated variety, Jellicorse, yielded 60.2 bus.

**Washington, D. C.**—The bill to appropriate \$25,000,000 to encourage the saving of legume seed by farmers was advocated recently at a meeting with the agricultural committee of the House, by a group of seedsmen including Ed Mangelsdorf of St. Louis, and Fred Kellogg of Milwaukee, Wis.

**Portland, Ore.**—Oregon could grow more of the much-wanted ladino clover seed any time the government wants it bad enough to stabilize the price over a period of years, according to report of the legume seed committee of the Oregon Seed Growers' league. Robert Warren, Forrest Grove chairman of that committee, said in its report that Ladino is probably the most uncertain seed producer of the clovers, with yields in bad years sometimes going as low as 30 lbs. per acre. The grower is entitled to a high established price for a number of years, so he can balance poor years with good. Josephine County produces much more ladino clover seed than all the rest of the state combined.—F. K. H.

## New Seed Trade Marks

**Associated Seed Growers, New Haven, Conn.** The words Rice's Seeds, No. 465,057, for field and garden seeds.

**The Old Nick Seed Treatment Co., Rockport, Mo.** The representation of a black cat and the words Old Nick's Seed Treatment, No. 463,328, for seed grains.

**Albia, Ia.**—The John Goode Seed & Feed Store held open house Mar. 4, with coffee and doughnuts all day.

## Draft Deferments for Seedsmen

The Feb. 25 release by the War Manpower Commission has been analyzed as follows in a bulletin of the American Seed Trade Ass'n:

This revised list continues "seed production" and "seed processing" as essential. Among the seeds declared "essential" are:—hybrid seed corn, alfalfa and other hay seeds, cover crop seeds, grass seeds, and all vegetable seeds.

Seed processing, cleaning, threshing, etc., are declared to be essential agricultural services. Seed production and processing maintain their previously announced high position on the list of essential activities. They remain as No. 5 on the list of 35 essential activities. "Seed production" is under Section 5-A and "seed processing" under Section 5-B.

This Feb. 25 release of the W.M.C. makes specific reference to Selective Service Local Board Release No. 164. It was thru Local Board Release No. 164 that our titles were established as "essential" activities relating to food production. The war unit bulletin No. 175 and the essential activity bulletins Nos. 18 and 5 are a part of the overall release No. 164. The "essential" activities are the same as those set out and explained in detail in the A.S.T.A. bulletin of February 20, 1943. They are as follows:

1. Field Supervisor, Seed Production.
2. Foreman Agricultural Services, such as Foreman of Seed Processing.
3. Manager or Superintendent Agricultural Services.
4. Field Crop Production Supervisor.
5. Agronomist.
6. Seed Cleaning and Processing Machine Operator (all around).
7. Seed Analyst.

The Feb. 25 release also reaffirms the war unit valuations given to seed production.

Vegetable seeds still are entitled to one and one-half war units for each acre of seed. Hybrid seed corn receives one unit for each three acres of seed.

The war units, which were established in Local Board Release No. 175, gives a blanket ruling, equaling one and one-half war units, to all vegetable seeds. Local boards, however, have been inclined to refuse war units for the production of seeds of the so-called "unessential" vegetable crops. Among the so-called "unessential" vegetable crops are watermelon, cantaloupe, cucumber, head lettuce, bleached celery, etc.

On several occasions attempts have been made to insist upon the general classification and the resulting war units for all vegetable seeds. Selective Service headquarters in Washington appear to have concluded that no war unit credit will be given to seed crops of the so-called "unessential" vegetables unless the acreage in question (of "unessential" vegetable seeds) is under contract for delivery to the government under lend-lease.

As explained in the Jan. 7 bulletin, a "super critical" list of occupations was established by the W.M.C. Individuals engaged in occupations on the "super critical" list are supposed to receive very careful consideration for deferment by local boards. "Agronomists," "Plant

Pathologists" and "Plant Physiologists" are on the "super critical" list.

## Plush, a New Barley

Plush is a new Canadian barley resulting from a cross made at the Brandon Experiment Station, between Lion and Bearer. Plush matures moderately late, about like Manchuria, has a moderately erect head, smooth awn, a relatively strong straw with satisfactory height and has white grain. While information on its malting qualities is rather incomplete, information which is available suggests that it should be satisfactory.

Tests on comparable samples show that Plush compares favorably with Manchuria in extract yield and diastatic power. Plush is less susceptible to stripe disease than most of the varieties, seems to have some tolerance to stem rust but is susceptible to most of the other barley diseases and especially to loose smut.—No. Dak. Exp. Sta. Bulletin.

## Better Varieties of Oats

New, highly improved oat varieties make it possible to cut acreage, and still produce as much grain as would have been grown on a larger acreage of the common oats varieties.

Tama, Control, Boone and Marion are the new oats. To this list might be added Cedar, Vikota and Vicland. Although these varieties are resistant to crown or leaf rust, stem rust and both smuts of oats, just as are Tama, Control, Boone and Marion, there is little seed of Vikota, Vicland and Cedar available for 1944 in Iowa.

The new varieties are top-notchers in yields. In tests conducted by Iowa State College at Ames and Kanawha during 1938 to 1943, inclusive, the seven varieties showed an average margin of 12.5 bus. per acre more than the average for 10 of the common varieties, including such favorites of a few years ago as Towa 105, Logold and Vanguard. All of the varieties are early maturing. Tama made an especially good showing, averaging 70.6 bus. per acre, being exceeded only slightly by Cedar.

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## Bromegrass-Alfalfa Mixture Is a Winner

A cropping change of history-making proportions appears to be shaping up in Wisconsin, on the strength of the Experiment Station's finding that bromegrass is far better than timothy as a companion crop for alfalfa in long rotations.

These are the advantages of bromegrass, brought out in investigations begun in the 1930's:

1. Bromegrass and alfalfa yield considerably more than timothy and alfalfa or alfalfa alone.
2. Bromegrass is drought-resistant, furnishing pasture in midsummer when timothy or bluegrass dry up.
3. Cattle like bromegrass pasture extraordinarily well.
4. Bromegrass tends to fill in the spots where alfalfa dies out, whereas weeds often replace the legume in timothy-alfalfa mixtures.
5. Bromegrass starts very early in the spring, furnishing pasture earlier than any other Wisconsin crop except rye.

A most revealing story on the performance of bromegrass-alfalfa mixture lies in these figures on 1942 forage yields in pounds per acre, obtained in two cuttings by Henry Ahlgren and Sidney Posel on seedings made in 1939:

Common bromegrass-alfalfa .....	8331
Parkland bromegrass-alfalfa .....	8250
Timothy-alfalfa .....	5363
Alfalfa .....	4605
Parkland bromegrass .....	4361
Common bromegrass .....	3474
Timothy .....	3328
Bluegrass ("June grass") .....	2762

A promise and a warning are implied in these figures. The promise: Bromegrass-alfalfa mixture may yield fully one-third more than timothy-alfalfa by the third year, after the seedlings are well established. The warning: Don't seed bromegrass alone.

Alone, bromegrass is nothing to cheer about. In some trials it has yielded less than timothy and no more than bluegrass. For example, in 1942 pasture trials by Ahlgren and I. W. Rupel, bromegrass-alfalfa mixture had a 42% higher carrying capacity than bluegrass, but clear bromegrass furnished only 1% more grazing than bluegrass—or practically the same amount.

Both this Station and the farmers who have tried it generally find that clear bromegrass tends to be pale in color, slow to recover after grazing, and generally lacking in vigor and productiveness. Farmers often say it becomes "sod-bound." It does not become sod-bound when grown with alfalfa.

Why does alfalfa keep bromegrass from becoming sod-bound? Apparently because sod-binding is nothing more than nitrogen starvation—and alfalfa helps supply the nitrogen it takes to prevent it.

Since bromegrass is apt to be productive only so long as the alfalfa lasts, it is important to use varieties of alfalfa which make long-lived stands under Wisconsin's severe conditions. This Station recommends Ladak and Cossack, half and half, for the southern half of the state where bacterial wilt disease is a problem. In Southern Wisconsin these varieties generally last much longer than Common or Grimm, which may be winter-hardy but not wilt-resistant.

The Wisconsin Station recommends this seeding mixture for each acre of land: Common bromegrass, 8 to 10 lbs.; Ladak alfalfa, 5 lbs.; and Cossack alfalfa, 5 lbs. Seeding can be done in the spring with thinly-sown early grain as a nurse crop, or it can sometimes be done in August if the soil contains enough moisture at that time.

One peculiarity of bromegrass is that it is a "slow starter." This means it must have a good, clean seedbed if it is to come safely thru the first season, and it means bromegrass is not practical in short rotations.

## Get Behind the Seed Production Program

By JOHN W. NICOLSON, Chairman Task Force Committee of War Food Administration

Seedsmen will be glad to know the campaign to induce farmers to plant and harvest more legume and grass seed acreage is well under way.

The radio campaign which was decided upon at the Western Seedsmen's Ass'n convention in



Omaha has been an outstanding success. Fifty stations used the program regularly over the March 8th to 22nd period.

We expect to have another program in June when the farmer is cutting his first hay crop, and another in late July, when he might feel tempted to cut the second crop for hay. This latter is probably the most important.

The farm magazine and newspaper campaign is now well under way.

"Legume seeds are scarce. Your country needs them. Make plans now to save at least part of your hay crops for seed."

With the backing of private and government agencies, the Task Force Committee was able to present a bill in both houses of Congress authorizing the expenditure of 25 million dollars to promote the growing and harvesting of seed. Both the House and Senate bills are now in the hands of agriculture committees.

The seed shortage is so vital a matter to the farmer and to the trade, that we must let nothing

stand in the way of complete success. This means that every member of the trade, retailer, and wholesaler should take an active part in the campaign.

The Albert Dickinson Co. has made a constructive contribution by carrying the following on its regular price card:

"American agriculture is facing a serious situation. The crops of Red Clover, Alsike, Sweet Clover and Alfalfa Seeds have been small the past two seasons. As a result, where we normally have a carryover of 25 to 50 per cent of a normal season's requirements into the new crop, this year there will be little or none. Another short crop would be disastrous to the proper maintenance of our legume hay acreage—the very backbone of American agriculture.

"The American farmer will come through if advised of the need. It is up to you to bring this need to his attention.

"Display in a prominent place in your elevator or office the poster being sent you by the Field Seed Institute of North America.

"Distribute miniature reproductions of this poster to your farmers.

"These reproductions contain a condensed story of America's vital need for increased Clover and Alfalfa Seed production. We will furnish you these circulars without charge as long as our supply lasts. Write us for a supply today."

Let every seedsmen get out and lick this shortage problem.

## Kafir and Milo Ceiling in Texas

\$2.40 cwt. delivered Ft. Worth and/or Houston shipped on full rate is equal to \$2.08 f.o.b. loading stations and \$2.08 on No. 2 milo and kafir is the highest price at which they can be sold f.o.b. the cars Texas points by country shippers buying from farmers, says O.P.A. I hear of many country shippers selling at much higher prices, so I fear they are in for trouble for unless milo and kafir are sold to California and go to California you cannot get over \$2.40 C.A.F. Ft. Worth and/or Houston.

Margins, handling charges, etc., on grain sorghum, oats and barley are defined as normal to the trade, which certainly leave everything wide open, but until definite levels are announced I know of no way to control it.—G. E. Blewett, sec'y Texas Grain & Feed Dealers Ass'n.

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## Barley in North Dakota

By T. E. STOA, Agronomist, N. D. Agr. Exp. Sta.

North Dakota ranks near the top among the states in the amount of barley produced, Minnesota alone having a higher production. Other states high in amount grown are California, South Dakota and Wisconsin. In normal years North Dakota accounts for about 15 per cent of the total barley crop.

For malting purposes Wis. 38, despite a disappointing yield in 1943 in many places, appears to offer the most promise for sowing in 1944, in that area of the state where conditions most often permit the production of mellow barley. Other varieties offering some advantages are Manchuria and Odessa for hard malting, Plush and Kindred.

Wis. 38 is the most extensively grown malting variety. It has smooth awns, nodding heads, grows rather tall, has weak straw and a long weak neck that breaks readily in strong winds, matures late but has good capacity for yield and pearls white. Because it ripens late it is likely to be less satisfactory than earlier varieties in dry years. Wis. 38 has some tolerance to stem rust, also to leaf rust, and is less susceptible to the smuts than Manchuria. It is moderately resistant to barley stripe, but susceptible to mildew and moderately susceptible to scab. The Wis. 38 grain is more uniformly mellow and malts more evenly than other varieties. The malt is low in diastase.

Trebi is the highest yielding barley. Other feed barleys of promise are Spartan, Tregal and Velson. Any of the malting varieties may also be grown for feed.

## Southern Corn Hybrids

By HUGO STONEBERG

The corn research program conducted by the Louisiana Agricultural Experiment Station in cooperation with the Division of Cereal Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, has produced several outstanding corn hybrids adapted to Louisiana conditions. It has been necessary to develop hybrids from locally adapted varieties as the hybrids from the corn belt are characterized by loose, short husks and are not suited to environmental conditions in Louisiana. The excellent performance of Louisiana hybrids in tests during the past four years has created a great deal of interest and enthusiasm for them throughout the state, and it has become necessary to enlarge the hybrid corn program greatly in order to make hybrid seed corn available to farmers in increasing quantities.

Based on the performance records in tests conducted yearly from 1939 to 1942 at several locations in the state, several hybrid combinations have been found that exceed the production of regular varieties by 20 to 25 per cent. In demonstrations and farmers' trials, often 50 per cent increases have been obtained.

Louisiana hybrids are superior to regular varieties because, all hybrid plants produce two or more ears per plant while regular varieties have some barren plants; all plants are strong and sturdy with well developed roots, making them resistant to wind, storm and drought; all plants are resistant to insects and disease, and all ears are covered with long, tight and close fitting husks, making them resistant to weevil damage in the field and after storage.

Hybrids have been developed for the different areas of the state. Thus far, the white hybrids developed are adapted to the entire state except the southern area. For this area, yellow hybrids having flinty to semi-flinty kernels have been developed. The Louisiana hybrids regularly have two ears to the plant. Hybrids with large ears, either white or yellow in color, have been developed and will be produced commercially in the near future.

During the past three years, 1,000 to 2,000 bus. of hybrid seed have been produced annually. This seed has been distributed to grow-

ers through the retail seed dealers. Plans have been made to increase the supply of seed to meet the demands of the farmers which is expected to develop very rapidly as the merits of hybrid corn become better known.

Hybrid corn adapted to Louisiana has made its appearance at an opportune time when more feed is needed to meet the national emergency. On the average, a bushel of seed corn will plant 7 acres, and at this rate the 1,000 bus. produced in 1942 will plant 7,000 acres. With an average increase of 25 per cent, or 7 bus. per acre, this will mean an increase of 49,000 bushels of grain or \$49,000 when the crop is valued at \$1 per bushel. With the increased use of hybrid seed, the total production of corn in Louisiana should be substantially increased in the next few years.

## Demurrage on Set Back Cars Reloaded

Effective Apr. 1, for the "duration" the railroads have published the following rule on demurrage:

"When an empty car placed for loading grain or grain products is, after being loaded, set back and unloaded, and then reloaded and shipped outbound, the entire transaction will be treated as one loading transaction with a total of 48 hours' free time. If the car after being unloaded is released empty of this railroad, demurrage shall be charged, whether or not a charge is made for the movement; the time between the receipt of an order to move car back to the elevator at which unloaded and placement of the car at such elevator (not to include any time attributable to the act or neglect of the consignor or consignee) will be deducted from the total detention of the car."

The Supreme Court of the United States on Feb. 28 decided in favor of five non-co-operative milk producers in the Boston area, who resisted an order by the Department of Agriculture permitting milk co-operatives to charge them for marketing services. The Supreme Court reversed the District of Columbia Court of Appeals that dismissed the complaint by the non-co-operative producers.

**Grinder:** This paper says the Nips have abandoned two more atolls. What is an atoll?

**Mixer:** Webster says: Atole is a porridge of maize meal.

## Grain Carriers

**Chicago, Ill.**—The Mid-West Shippers Advisory Board will meet Apr. 5 and 6 at the Palmer House.

**New freight cars** on order Mar. 1 by Class I railroads totaled 33,012, of which 11,856 were plain box cars.

The O.D.T. reports that no wheat had been stored in piles on the ground in North Dakota during the last 60 days. Mar. 10 100 or less elevators were blocked.

**Bids** for the chartering of 16 lake vessels by private shippers have been opened by the U. S. Shipping Board; and probably will be available for grain during the season now beginning.

The 100 cars per day for the movement of Canadian grain to the United States for the past 30 days has been raised to 200 per day, beginning Mar. 13, to complete importation of 40,000,000 bus. by May 15.

In A. E. Staley Mfg. Co. terminal allowances the railroads have asked the Supreme Court to affirm the decision of federal district court setting aside the order of the Interstate Commerce Commission preventing the railroads from spotting cars in the Decatur plant without charge.

**Memphis, Tenn.**—The Davis Hay & Grain Co., composed of Claude B. Davis and Walter M. Berry, is charged with operating as a common carrier without proper certification by the Interstate Commerce Commission. C. Herbert Taylor, operating as Taylor Motor Freight, is charged with aiding and abetting the violation.—P. J. P.

In the Hoch-Smith Southern Grain Rate case the O.P.A. has asked the Interstate Commerce Commission to postpone any rate increase authorizations. Thirty boards of trade and individuals have filed objections to the one factor thru mileage rates, thru Freeman Bradford, general manager of the Indianapolis Board of Trade. The National Oats Co. has filed two exceptions to the report of Examiner Weaver, especially where he said "the general practice of the carriers is not to apply the grain products rates to rolled oats in the south."



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With the invasion of Europe imminent and American operations in the Pacific seriously menacing Japan, good packing, secure loading and careful handling of freight shipments are more important than ever before, according to E. A. Jack, of Pittsburgh, general chairman of the committee which will direct a nation-wide perfect shipping campaign during April.

Grain and grain products loading during the week ended Mar. 11 totaled 45,556 cars, a decrease of 2,725 cars below the preceding week and a decrease of 3,043 cars below the corresponding week in 1943. In the western districts alone, grain and grain products loading for the week totaled 30,187 cars, a decrease of 2,024 cars below the preceding week and a decrease of 4,266 cars below the corresponding week in 1943, as reported by the Ass'n of American Railroads.

Washington, D. C.—Jos. B. Eastman, director of the Office of Defense Transportation, died Mar. 15 of a heart ailment. He was a believer in the private enterprise way of American life, and had earned the esteem of railroad officials and shippers during the 25 years he held office as a member of the Interstate Commerce Commission. The railroads would have been taken over by the government had not Mr. Eastman's belief prevailed that greater efficiency for the war effort would result by leaving them to private management.

Hagerstown, Md.—D. A. Stickell & Sons, Inc., prevailed against the railroads in the U. S. District Court which dismissed the petition of the railroads asking that the operation of the order of the Interstate Commerce Commission be enjoined. The Commission required establishment of thru routes and joint rates on grain milled in transit. The Pennsylvania has been charging an extra 4.5c per 100 lbs. for back haul, which destroyed the Stickell firm's margin of profit. This was not paid by competitors moving grain from Chicago to the eastern peninsula.

Questions involving the formula for distribution among the states of proposed post-war federal-aid highway funds and the basis of federal-state matching of funds featured House Roads Committee hearings on H. R. 2426 (same as S. 971) the first two weeks of this month. The measure, sponsored by the American Ass'n of State Highway Officials, proposes a \$4 billion street and highway development program during the first three years following the end of the war, with 75 per cent of the money to be supplied by the federal government and 25 per cent by the states.

### Tax of 3% Goes on U. S. Freight

The 1943 Revenue Act removes the exemption from payment of 3% federal excise tax on transportation of United States government goods. The exemption is continued, however, on shipments of property by a state or political sub-division thereof, and to water transportation of property—except on great lakes—by the War Shipping Administration.

After June 1, 1944 the transportation will be applicable with respect to transportation of property sold to the United States government.

Section 3475 (b) of the Internal Revenue Code was amended to read as follows:

"(b) Exemption of Government Transportation.—The tax imposed under this section shall not apply to (1) amounts paid for the transportation of property to or from the government of a State, Territory of the United States, or political subdivision thereof, or the District of Columbia, or any corporation created by Act of Congress to act in matters of relief under the treaty of Geneva of August 22, 1864, (2) amounts paid to the Post Office Department for the transportation of property, or (3)

amounts paid by or to the War Shipping Administration for the transportation of property by water from one point in the United States to another, except between points on the Great Lakes."

### The Box Car Problem

By F. T. Westmeyer, district manager car service division Ass'n of American Railroads, before Pacific Northwest Feed Ass'n.

Until July 24, 1943, box car requirements were met without serious difficulty. Since then shortages have been reported particularly in the Northwest. Shortages continue to persist in several states.

Grain and grain products during the first six weeks of 1944 were running 12% ahead of 1943, and 29% ahead of 1942. This accounts for 34,000 cars in six weeks, as compared with the same period of a year ago.—L.C.L. freight is 16% ahead of last year, and this accounts for approximately 80,000 cars in six weeks.

Forest products which frequently move in box cars are loading 14% ahead of a year ago. Again based on the national loading for the first six weeks of this year.

Potash Loading in New Mexico, sulphur in Texas, soda ash in the middle west, moulding sands from as far away as Illinois, hay from Montana, which I am told is an unusual movement, into this area have all taken their part of the box car supply.

Box cars have even been used to supplement the movement of oil by tank cars. During 1943 more than 14,000 cars handled oil in drums from the southwest to the Atlantic seaboard, due to sheer necessity. The volume of box cars, and they are the highest class cars in service loading explosives of one kind or another is heavy.

MORE GRAIN RECONSIGNMENT.—During the first eleven weeks of last year's crop, arriving in Minneapolis and Duluth, there was a 50% increase in reconsignments of grain in the same car to destinations beyond the terminal markets. This has also occurred elsewhere in varying degrees. This means that the days required for a complete trip to the unloading point are increased, and the box car is correspondingly not available so soon for another load.

Heavier loading is mandatory under O.D.T. 18, and is to be encouraged. There is no easier way to create cars than heavier loading. A 25% increase in the average load makes one car available for every four loaded.

An active campaign is constantly being conducted to apprehend and stop contamination of high class box cars. A high class car once contaminated is generally lost for some time to usage for high class loading, like flour, sugar, feed and similar commodities.

Frequently rebuilding of the entire interior of the car is necessary to place such a car in first class condition.—F. K. H.

### Exporting Handicaps at Canadian Atlantic Ports

St. Johns, N. B.—Grain continues to pour into the elevators at St. Johns, N. B. and Halifax, N. S., for loading on steamers bound for British ports. All Canadian grain elevators on the Atlantic coast are functioning day and night, in the effort to keep pace with the movement of the grain in and out. Full and part cargoes are being taken on the steamers and the supply constitutes an all time record. The grain is being milled in the British Isles, not only for the civilian population of England, Ireland, Scotland, Wales, and the British armed forces, but for the Canadian army and air force stationed in Britain, North Africa and Italy.

There is one phase of the movement of freight from Canada to Britain which applies to grain. That is the wholesale thievery which has been prevailing the past four years along the waterfronts of all the ports, and particularly St. Johns and Halifax.

Despite the congestion on the Canadian railroads and about which there have been a deluge of complaints at the Canadian ports and also in the Canadian parliament, the grain continues to move into the elevators. Cars have been scarce, and not equal to the demand and this has necessitated the use of antiquated cars in moving the grain. Many of the cars are sadly in need of reconditioning. Some of which had been sidetracked in railroad yards for years. Every available car is constantly on the move in transporting grain to the Atlantic coast elevators. The labor shortage has been a handicap not only to the railroads but to the elevators and stevedores, and use has been made of men of 65 and older. These are not only beyond the military draft but the selective service employment draft, and can be hired without being forced to consult the selective service as the intermediary. Steamship bottoms are not nearly as scarce as they were at this time last year, due to the comparative inactivity of the Nazi undersea raiders.—Wm. McNulty.

### Big Lake Movement of Grain Expected

A heavy grain movement on the Great Lakes during the 1944 navigation season was foreseen by the Buffalo grain trade after a survey of shipping and transportation problems was made by the Lower Lakes Grain Committee.

Elwood L. Chase, committee chairman, said 285,000,000 bus. of grain could be moved by water, or approximately 100,000,000 bus. more than were transported last year.

Canada is prepared to send, via the Great Lakes, approximately 65,000,000 bus. of wheat and coarse grain to the United States between the opening of navigation to July 1, a Canadian wheat board official declared.—P. J. P.

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# Feedstuffs

**Brewers Dried Grains** production in February was 15,300 tons, against 17,200 tons in February, 1942, as reported by the W.F.A.

**Distillers Dried Grains** production in February is reported by the War Food Administration to have been 35,300 tons, against 28,000 tons in February, 1942.

**Washington, D. C.**—Walter Berger, chief of the feed and livestock branch, has been looking into reports that named country elevator operators have been insisting on the return of meal with sales of soybeans.

**Washington, D. C.**—The industry committee of the Millers National Federation met Walter Berger of the feed and livestock branch of the W.F.A. Mar. 10 to consider the distribution of millfeeds. No solution of allocation was arrived at, but the millers held an historical basis would be unsatisfactory.

**Washington, D. C.**—Sales of feed wheat by the C.C.C. during January fell off considerably, having been 19,000,000 bus., against 24,000,000 during December. Total sales of feed wheat by C.C.C. in the first half of the present crop year beginning July 1, 1943, amounted to an estimated 213 million bus., compared with 274 million in the entire crop year beginning July 1, 1942.

**After Mar. 15** in Oklahoma and April 1 in New Mexico and Texas, processors no longer will be required to obtain a statement from buyers approved by the county A. A. A. Committee in order to deliver more than 500 pounds per month of protein meal to an individual. The required statement regarding the use of more than 500 pounds of protein meal monthly in mixed feeds also will be eliminated.

**The number of early lambs** in the principal producing states will be about 6 per cent smaller this year than last and the smallest number in at least 8 years. This reduction is a result of the smaller number of breeding ewes in these states, since the number of early lambs saved per 100 ewes was larger this year than last. Marketings of early lambs before July 1 will be considerably smaller than last year, but this decrease may be largely offset by a larger movement of grass fat yearling lambs and wethers from Texas.—U. S. D. A.

**Indianapolis, Ind.**—The State Feed Advisory Committee recently divided the state's allotment of 3,029 tons of protein meals. Of this total tonnage, 46% was directed for the distribution to feed manufacturers and mixers. Quantities more than carlots are distributed by the State Committee, and smaller amounts will be obtained thru shipments made to the various counties. Applications for the sale of meals sold straight to feeders, will have to be made thru and be provided by the County A.A.A. on shipments made to the county.

**San Francisco, Calif.**—The allocations of protein meal for California under the set-aside order for March are as follows: Linseed 1,159 tons; soybeans 6,253 tons; cottonseed 1,609 tons; total 9,021 tons. As of Mar. 8, 1944, state A.A.A. Committee reports no allocations had as yet been made, but that these would be completed within the next few days. Two principal factors have caused some delay in allocations, as follows: 1. Delay of dealers and mixers in getting their requests in to state and county offices. 2. Many obvious errors in the preparation of the application.

**Washington, D. C.**—The O.P.A. holds that farmer to farmer sales of alfalfa hay should be subject to price control, while the W.F.A. holds that such transactions should be exempt, in the forthcoming regulations.

**The War Food Administration** is now making a full mailing to feed manufacturers of F.P.A. Form 5, which is designed to gather data necessary for determining protein meal use quotas for 1944. Information on F.P.A. Form 5, is required from all mixed feed manufacturers covered by Food Production Order 9, Revision 3. Three copies of the form and a set of instructions is being sent to each manufacturer. Two of the copies must be filled out and mailed to Washington.

**Buffalo, N. Y.**—"The manpower situation, if anything, is more desperate than the grain situation because we have a definite hope that we will be able to obtain enough grain shipping space this year. But the manpower situation is more difficult. We cannot stand to lose more men to the armed forces or to other industries no less essential than this. If our manpower is reduced further, one or more of our feed manufacturing units in Buffalo will have to be closed down, regardless of grain supplies."—Elwood L. Chase of the Co-operative G.L.F. Mills Inc.—G. E. T.

## Production of Feed in United States

The A.A.A. and B.A.E. have just issued a report on "The Production and Distribution of Specified Feed and of Commercial Mixed Feeds, 1941-1943" based on reports from 578 plants situated in every state except Nevada, that turned out 13,300,000 tons of mixed feed in 1942, plants not reporting probably bringing the total up to about 20,000,000 tons. It is estimated that the total production the year 1943 was 29,000,000 tons.

In 1942, New York was the largest producer of commercial mixed poultry feeds, followed by Ohio and California.

	Production of Feed Ingredients		
	1941	1942	1943
Meat scraps .....	538,227	601,969	529,638
Fish meal .....	167,720	149,293	143,565
Corn gluten feed .....	849,202	992,205	879,427
Brewers' grains .....	.....	.....	149,631
Distillers' grains .....	182,367	294,627	278,011
Alfalfa meal .....	390,796	546,111	533,194
Mixed feed .....	10,035,000	13,353,000	*10,526,000

\*First half.

## Idaho Feed Men Organize

The Idaho Feed Dealers and Manufacturers Ass'n was formed recently at Caldwell, Idaho. The secretary is P. H. Beveridge, Boise, who is also sec'y of the Idaho Coal Dealers Ass'n.

To work with the state A.A.A. in allocating protein meal the Ass'n named Dewey Davidson, Weiser; W. C. Skinner, Pocatello; R. B. Wright, Lewiston; J. A. Cederquist, Twin Falls.

The pres. is E. L. Vassar of Caldwell, vice pres. D. L. Carson, Rupert; Marshall Keyes, Idaho Falls, and R. B. Wright, Lewiston. Edward Randall, Boise, is treas.

An advisory board of control is composed of two members from each of the four districts into which the state has been divided, including M. B. Mickelson and R. B. Wright, both of Lewiston, northern Idaho; E. L. Vassar, Caldwell, Dewey Davidson, Weiser, southwestern Idaho and eastern Oregon; J. A. Cederquist, Twin Falls, D. L. Carlson, Rupert, south central Idaho; Marshall Keyes, Idaho Falls, William C. Skinner, Pocatello, southeastern Idaho. Earl H. Brockman was elected member-at-large.

## Sources of Vitamins

By RAYMOND T. PARKHURST, Massachusetts State College

War Production Board Order L-40 restricts the amount of vitamin A from fish oils and fish liver oils to 2,000 U.S.P. units per pound of feed as fed to livestock. Whether or not it is necessary to use this amount will depend primarily upon the quality of roughage fed. It certainly will do no harm. Some strictly vitamin A oils have been available for use in calf and fitting rations, to be fed where the need for vitamin D is not indicated.

Dairy calves which are exposed a half an hour daily to bright sunshine or calves fed two to three pounds of suncured roughage probably get enough vitamin D to meet their needs. Calves little exposed to sunlight and receiving dehydrated alfalfa or green hay that has been cured almost without sunlight usually benefit from supplementary vitamin D.

Rickets and other symptoms of vitamin D deficiency can usually be prevented with 200 to 300 U.S.P. units of vitamin D per 100 lbs of live weight. The vitamin D requirements of adult cattle can probably be satisfied by regular exposure to sunshine and liberal amounts of sun-cured roughage. When not otherwise supplied, vitamin D can be added to dairy rations by means of fish oil concentrates, irradiated yeast or D-activated animal sterol. The supply of vitamin D is adequate to meet all needs. During the past year, reinforced oils have contained 800 units, instead of 400 units, of vitamin D per gram. When used, these oils at present also carry 2,000 or 4,000 U.S.P. units of vitamin A per gram.

**D-D-T** is a new insecticide harmless to warmblooded animals, but fatal to many insects even when used in infinitesimally dilute amounts. The whole production is now purchased by the Army. In chemical nomenclature it is described as dichlorodiphenyl-trichlorethane.

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- 411-E contains 100 sets all Form E.
- 411-5 contains 60 sets Form A, 10 Form B, 10 Form C, 10 Form D and 10 Form E.

## Grain & Feed Journals

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327 South La Salle St., Chicago 4, Ill.



## Cobs of Real Value in Cattle Feed

By PAUL GERLAUGH, Ohio Agr. Exp. Sta.

In the feed lots of Ohio State University we fed to yearling steers a full feed of corn-and-cob meal, three-fourths of a full feed, and one-half of a full feed of corn-and-cob meal, with hay fed in such amount as the steers wanted. Under price conditions that prevailed at that time, the full feed of corn-and-cob meal and the three-fourths of a full feed worked out satisfactorily from the economy angle; the half full feed did not.

Under present day conditions, the half a full feed of corn would probably make for a preferable financial return to a more generous amount. So much depends upon price regulations as it may affect market cattle. However, most everyone feels that a very strong demand for beef will prevail during the late winter and spring season. Probably a stronger demand than the supply will accommodate.

Let me tell you of some experience we had this past year in fattening steer calves in our feed lots from December to August. These calves weighed nearly 500 pounds when the test started. The calves were divided in three lots, of twenty each, which were group fed and three lots of twelve each which were individually fed. Both the group and individually fed were on the same test—simply checking each others performance. All calves were fed 2 pounds of soybean oil meal daily and what hay they wanted.

Ear corn was ground thru a hammer mill and the resulting corn-and-cob meal full fed to a lot of group fed and a lot of individually fed steers. A ton of ear corn was shelled, the cobs weighed, the shelled corn ground thru the hammer mill, using the same screen, and the ground shelled corn full fed to a lot of group fed and a lot of individually fed steers.

To another ton of ear corn the cobs obtained from shelling the previous ton of ear corn were added and this mixture of ear corn and cobs was ground thru the same mill and full fed to a lot of group fed and a lot of individually fed steers.

The regular corn-and-cob meal fed lots out-gained the ground shelled corn lots and the high cob content corn-and-cob meal lots were lowest in daily gain. We were surprised at the small handicap in gains due to the high cob content corn-and-cob meal.

It required 572 pounds of ground shelled corn to produce a hundred pounds of gain in the group fed cattle. It required 507 pounds of ground shelled corn and 115 pounds of ground cobs to produce a hundred weight of gain when regular corn-and-cob meal was fed and it required 444 pounds of ground shelled corn and 201 pounds of ground cobs to produce a hundred pounds of gain when the high cob content corn-and-cob meal was fed.

The ground shelled corn fed cattle dressed 61 per cent, the regular corn-and-cob meal fed lot dressed 60.2 per cent, and the high cob content corn-and-cob meal fed lot dressed 59.6 per cent. There were as many high choice carcasses in this latter lot as in either of the other groups. I am sorry to say that we don't have the explanation. We have several thoughts, no definite suggestions, but are conducting a similar test this coming season. Dr. Wise Burroughs, who is associated in the project, has during the past several years, obtained equally surprising results when using cobs in various combinations of corn and hay in his work at the Reynoldsburg laboratories. More work is necessary before we care to make any recommendations.

Experiments conducted at the Madison County farm, comparing corn-and-cob meal with shelled corn left no reason to question the advisability of using corn-and-cob meal. We feel certain that corn-and-cob meal is preferable to ground shelled corn. If that be true then who is there who can be certain that the ratio of

56 pounds shelled corn to 14 pounds of cobs is the best possible ratio of shelled corn to cobs to use in our cattle fattening rations?

## Salt in the Ration

By J. R. HAAG, chemist Oregon State College

Common salt is made up of the elements sodium and chlorine and is known to chemists as sodium chloride. The craving for salt varies with the species of animal and the diet. Just what factors are responsible for this craving is not clearly understood. It is recognized, however, that for practical purposes the appetite of the animal is a helpful guide in determining salt requirements.

The daily salt requirements of farm animals are said to vary from about 0.25 to 0.5 ounce for calves and sheep to perhaps 3 ounces for high-producing cows. While it is a common practice to add salt to grain mixtures and mineral licks, it is considered wise to allow farm animals free access to salt at all times. This will assure an abundant supply and lessen the danger of overeating, often encountered where salt is not supplied regularly.

Animals that have been denied salt for some time and then are given free access to it may eat such large quantities as to cause digestive disturbances and even death. Animals, hungry for salt should be given small quantities daily until the intense craving for salt has largely disappeared. The importance of allowing free access to common salt at all times is frequently overlooked. Where block salt is used, ample time must be allowed for animals to consume the desired amount.

Salt is not as poisonous to chickens as is popularly believed. Rations containing enough salt to be distinctly harmful to chickens are unpleasantly salty to the taste. The salt requirements of poultry are met by adding not more than 0.5 per cent of salt to the total ration (1 per cent of the mash when approximately equal amounts of mash and scratch grain are fed).

## New Procedure on Protein Meal Quotas

A new procedure on petitions for alleged hardship relief from provisions of Food Production Order 9, Revision 3, has been in effect since March 1. Petitions for the review of protein meal use quotas of feed manufacturers claiming undue hardships are now reviewed jointly by the State Agricultural Conservation Committee and the State Feed Advisory Committee, with final decision resting with the Feed and Livestock Branch of the War Food Administration, Washington, D. C. Previously, petitions were sent directly to Washington.

The two state units review all petitions once each month when they meet to allocate protein meal tonnage, and submit recommendations and reasons to Washington.

Petitioners should state the tonnage of protein meal used in each month for which the plant operated in 1942 and 1943, and other helpful information (such as installation of enlarged capacity or impediment of operations because of fire). A petitioner must file a separate appeal for each plant. Plants operated during all months of 1942 and 1943 have no basis for appeal except in cases of unusual circumstances such as fire, or emergency production programs.

Since present feed mixing facilities are believed adequate, no new food mixing plants

should be installed without prior application for protein meal quotas. Altho officials realize the necessity for replacement equipment, they point out that installation of new equipment with larger capacity will not constitute a basis for increased quotas.

The Feed and Livestock Branch points out that the volume of protein meal available to a state is not boosted by increased manufacturers' use quotas. Increased individual quotas can be effected only by drawing on the applicable state's own set-aside meal or thru diversion from other meal users in the state.

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# Poultry Feeds and Feeding

Chicago, Ill.—The International Baby Chick Ass'n will hold its annual meeting July 25 to 28 at the Stevens Hotel, where about 32,000 square feet of exhibit space will be available.

Lafayette, Ind.—A summary of complete records kept by the owners of 70 Indiana flocks, in co-operation with the Purdue University Agricultural Extension Service, shows that the average labor return per hen in these flocks was \$2.75 for 1943. This is 93 cents higher than in 1942, and is even higher than the returns shown for the boom year of 1929.

## Sulphur in Coccidiosis Control

Laboratory and field trials covering several years' work have shown that sulphur has definite value as a preventive of coccidiosis. It is not a cure-all. It is not even a cure for the affected individual, but has great value if used properly. There is no known "cure" for coccidiosis. The more effective preventive treatment involves the use of sulphur and charcoal before the disease occurs. Studies this past year (and previously) justify the statements that follow.

Histological studies confirmed earlier findings that the sporozoite is the stage affected by sulphur. This is the stage just before the organism enters the intestinal wall. A laboratory trial in which chicks were artificially inoculated again showed sulphur to effectively control coccidiosis, whereas four "remedies" purchased locally failed to protect the chicks. In field trials with 88 cooperating farmers sulphur and charcoal prevented coccidiosis, in other cases the cycle of infection was broken. Many farmers reported the least mortality from coccidiosis that they have ever experienced.—Louisiana Agr. Exp. Station.

## Oat Hull Factor in Chick Growth

The Iowa Station has found that oat hulls contain some factor or factors present in dried skimmilk or dried buttermilk, probably identical with the alcohol-precipitate factor found in dried brewers' yeast to be essential for nutrition of the chick by Schumacher and Heuser. The amount of the factor present was probably controlled by the manufacturing process.

Additions of 20% oat hulls or 5% yeast to ration of cereals, dried milk products, cod-liver oil, and minerals caused increased growth of chicks. Increased bulk was not the responsible factor, as spruce pulp and regenerated cellulose caused increased feed consumption but did not produce increased weight in the 8-week test. The increased growth from 5% yeast was approximately equal to that from 20% oat hulls. The additional growth was somewhat greater on dried skimmilk than on dried buttermilk rations. Amounts of 2.5% brewers' yeast stimulated growth, but 5% yeast or 0.15% choline was needed as a supplement to the Cornell ration to prevent perosis.

Study of the activity of fractions of the oat hulls showed that the active principle was partly soluble in water and precipitated by ethanol. A 50% ethanol extraction of oat hulls had a growth-stimulating effect similar to that from the alcohol-precipitate factor. The activity of the alcohol extraction of the residue showed that all the growth-promoting factor or factors were not removed by water extraction.

Beneficial effects on growth were obtained from the replacement of peanut meal by soybean meal and from supplements of wheat bran. The number of Single-Comb White Leghorn chicks on the different rations with the varied supplements ranged from 15 to 20. These supplements were added to the Cornell ration and other rations, oat groats and skimmilk, corn and casein, and meat scrap.

## Broiler Production with High Protein Feeds

The Mississippi Agr. Exp. Sta. reports that shrimp meal carries sufficient minerals when fed as the sole high-protein source or in combination with vegetable protein at the rate of 9 to 12 lbs. practically to eliminate perosis. Meat scraps fed at the rate of 17 lbs. should be supplemented with magnesium sulphate.

Soybean-oil meal supplemented with minerals and fed at the rate of 22 lbs. compared favorably to animal protein sources in average chick weight while cottonseed meal fed at the same rate gave the poorest results of all high-protein feeds in average chick weight, vigor and finish. Cottonseed meal fed at the rate of 8 or 9 lbs. gave good results when fed in combination with machine-dried shrimp meal and soybean-oil meal.

## Calcium and Phosphorus in Vitamin Deficient Diet

Increasing the calcium and phosphorus content of a vitamin D-deficient diet to 3.35 and 2.03%, respectively, was more effective in increasing the bone ash in 3-week-old chicks than was the addition of 20 A.O.A.C. units of vitamin D, but high mineral levels in the practical chick mash were less effective than vitamin D in promoting growth and preventing crooked breast bones.

When chicks were fed increasing quantities of calcium and phosphorus, in the ratio of 2 to 1, supplementing a practical mash from which the vitamin D source had been omitted, bone ash and live weight at 10 weeks of age increased with increasing mineral up to a dietary calcium content of 4.42% and then decreased as the dietary mineral was further increased.

Five units of vitamin D added to a diet containing 3.6% calcium induced better growth, feed efficiency and bone ash than did 10 units added to a diet containing 1.7% calcium, the calcium-phosphorus ratio being 2 to 1 in both cases. The addition of 0.1% choline to a "mineralized" vitamin D-deficient diet, with or without added vitamin D, improved growth, feed efficiency and feathering.

## Vitamins

By RAYMOND J. PARKHURST before Vermont Feed Dealers and Manufacturers

"Vitamins" are new. In fact, they are so new that not too much can be said now about their importance in poultry feeding. Vitamins are organic compounds required for the health and well-being of animals. Vitamins do all that vitamins do, but in addition act as suppliers of energy or help to build cells. Essential fatty acids are vitamins, and choline is tentatively classified as one. Choline is required by all animals so far investigated. In the absence of choline, methionine, an essential amino acid, is a third less effective. As the deficiency in soybean proteins may be the lack of sufficient available methionine, choline may prove of particular value in rations which are relatively low in protein concentrates. Choline may be made synthetically and is available as choline chloride. Choline has been shown to be effective in preventing perosis in chicks and turkeys. Choline deficiency has been shown also to result in decreased growth, decreased egg production and higher mortality in adults through abortion of egg yolks and a higher fatty acid content of the livers. These conditions have been overcome by additions of choline. Liver meal, fish meal, soybean oil meal and barley meal are sources of choline, while milk by-products seem to be deficient. Only 0.1 to 0.25% of choline seems to be required in the ration.

Heating of soybean protein may release the methionine and make it available or methionine-rich proteins may be added to the soybean proteins to remedy the deficiency. Milk and fish meal proteins both give the supplementary values needed by both ground soybeans and soybean oil meal. Up to 6% of the total poultry ration can comprise ground soybeans. Is the value of the fish meal in these soybean diets due to its methionine or to its choline content, or both? Further research needs to be done to answer this question.

## Calcium for Egg Shells

By D. C. KENNARD, Ohio Exp. Station

Oyster shell, which has been extensively used for feeding layers, has become scarce in some localities so that many layers have been denied this essential part of their ration. Limestone grit, containing 90 per cent or more of calcium carbonate, is the best known available substitute for oyster shell. Unfortunately, there is little or no 90 per cent or more calcium carbonate limestone grit available locally for poultry feeding in many sections of the country, including Ohio.

Dolomitic or magnesia limestone is available almost everywhere but unfortunately it is ill suited for feeding poultry. However, the shortage of oyster shell or limestone grit of poultry-feeding grade may force many poultrymen to resort to the use of magnesia limestone.

The purpose of this discussion is to emphasize the importance of oyster shell or calcium carbonate grit in the ration for layers and to familiarize poultrymen and feed merchants with the liabilities that attend the use of dolomitic or magnesia limestone.

Various experiment stations (California, Iowa, Kentucky, Maryland, and Utah) have conducted experiments comparing oyster shell with calcium carbonate limestone grit. Their reports conclusively indicate that comparable results in egg production can be secured from either oyster shell or calcium carbonate (calcite, crystal, gray, or blue) limestone grit when fed to layers. Contrary to this, the use of dolomitic or magnesia limestone by the New York, Ohio, Utah, and Wisconsin Stations invariably resulted in failure.

In 1919, Wheeler of the Geneva, New York, Station stated, "The functions of calcium are very important and some of them are directly antagonistic to those of magnesium, the nearest to calcium chemically of the recognized elements of the body and of ordinary foods. But the two elements are associated in nature in many ways, and magnesium seemingly might serve to some extent in place of calcium for such purposes as egg-shell material when calcium is lacking. No instance was found where magnesium did this to any significant extent, or replaced calcium in the bones from which it was withdrawn for shell material, although both elements are normal constituents of these structures."

Halpin and Hayes of Wisconsin reported three tests in 1922 in which much better egg production was secured from hens receiving oyster shell than from those receiving limestone grit relatively high in its percentage of magnesium.

Alder of Utah reported in 1927 an experiment in which he states: "It was necessary to discontinue the feeding of limestone high in magnesium content to layers because of the unfavorable results on the health of the birds. Towards the end of four months, during which time the layers received dolomitic limestone, the pullets became extremely nervous, very sensitive and easily frightened, and their egg production decreased with the shells of the eggs becoming progressively thinner. Practically every bird in the pen had developed diarrhea. All these symptoms cleared up in a short time after substituting a practically pure calcium (blue) limestone. Contrary to the ill effect upon the layers which received the dolomitic magnesium limestone grit in this experiment, the calcite (99 per cent calcium carbonate) lime-



stone grit fed another group of layers proved as satisfactory as oyster shell."

**MORE EGGS WITH OYSTER SHELL.**—The groups which received oyster shell averaged 20 more eggs per bird than did those that received dolomitic magnesia limestone grit (80 per cent calcium carbonate) and 42 more eggs per bird than the groups that received no calcium carbonate supplement for egg-shell formation. It should be emphasized here that the dolomitic magnesia limestone grit used in these experiments by the Ohio Station was of a higher quality and contained more calcium and less magnesium than many grades of limestone which are available and may be used for poultry feeding. Obviously, the use of lower grades of magnesia limestone may be attended by far greater ill effects, as experienced in the experiments conducted by the Utah Agricultural Experiment Station to which previous reference has been made. The groups which received both oyster shell and dolomitic magnesia limestone grit laid as well as the groups which received oyster shell and hard (mica) grit, especially as there was insufficient dolomitic magnesia limestone grit consumed to cause any ill effect. Incidentally there was no significant evidence in these experiments to indicate that hard grit had any beneficial effect, either for feed disintegration or increased utilization of the feed.

Inasmuch as the negative results of the two years' experiments by the Ohio Agricultural Experiment Station are in agreement with the experimental results and interpretations of the New York, Utah, and Wisconsin Stations, it seems there is ample evidence to indicate that dolomitic (magnesia) limestone is ill suited for feeding poultry. Consequently, poultrymen and feed merchants should make every effort to secure oyster shell or calcium carbonate limestone grit of poultry-feeding grade.

While there are some available supplies of calcium carbonate limestone grit of poultry-feeding grade from other states, it is doubtful if there is any limestone grit now available from Ohio quarries which will meet the requirements for poultry feeding. No doubt there are some deposits of high-calcium limestone in Ohio or nearby states that can and will be made available for feeding poultry.

The common practice of adding 1 to 3 per cent pulverized limestone to poultry mashes as a source of calcium is questionable for two reasons: first, it may be fertilizer dolomitic magnesia limestone ill suited for poultry feeding; and second, it should be in a granular (chick-size grit) form for best results. The limestone grit or chick size oyster shell is more slowly dissolved and does not immediately neutralize hydrochloric acid (which has other important functions to perform) in the digestive tract as does finely ground limestone or oyster shell.

**LIMESTONE OF UNCERTAIN QUALITY.**—The primary advantage of oyster shell for poultry feeding is that it is a product standardized by nature and can be safely assumed to contain 95 to 98 per cent calcium carbonate. On the other hand, limestone is a highly variable product (even in the same quarry, in many instances) and requires a close checking of its calcium and magnesium contents when used for feeding poultry. Because limestone generally contains both calcium carbonate and magnesium carbonate, it is necessary, when testing limestone for poultry-feeding needs, to determine the actual percentage of calcium carbonate present instead of relying on the acid neutralizing power of the limestone as a measure of its value.

In view of the increased need and importance of 90 per cent or more calcium carbonate limestone for feeding poultry owing to the scarcity of oyster shell, and since the percentage of calcium is a simple, dependable index to the quality and safety of limestone for feeding poultry, it would seem that state feed and fertilizer control agencies might well include limestone for feeding poultry in their inspection services. Poultrymen need this safeguard

against the unknowing use of dolomitic (magnesia) limestone for feeding their poultry. At the same time, feed merchants and manufacturers would be safeguarded against poultrymen's unknowing use of dolomitic limestone, the ill effects of which would, in many instances, be erroneously charged to mash mixtures or their ingredients which had been purchased.

**SUMMARY.**—A suitable source of calcium in the form of calcium carbonate, such as oyster shell or 90 per cent or more calcium carbonate (poultry-feeding grade) limestone for egg shell formation, is as essential for egg production as other parts of the ration for layers.

Experimental evidence indicates that dolomitic (magnesia) limestone is ill suited for feeding poultry.

Chick-size oyster shell or chick-size calcium carbonate limestone grit of poultry-feeding grade should be used rather than the pulverized products when a calcium supplement is to be added to poultry mashes.

The primary advantage of oyster shell as a source of calcium for poultry feeding is that it is a product standardized by nature and can be safely assumed to contain 95 to 98 per cent calcium carbonate; whereas, limestone is a highly variable product (even in the same quarry, in many instances) and requires a close checking of its calcium content when used for poultry feeding.

Because there is a greater need for calcium carbonate limestone grit of poultry-feeding grade for feeding poultry and because the percentage of calcium is a simple, dependable index to its quality and safety for feeding poultry, it has been suggested that limestone, to be used for feeding poultry, should be included under the State Feed and Fertilizer Control Inspection Service. Then, limestone containing 90 per cent or more of calcium carbonate could be designated as such and could be bought and sold on the basis of its quality and safety for feeding poultry.

### Beet Leaves a Valuable Feed

Fermented red- and sugar-beet leaves were found to be a valuable animal feed. Analyses showed crude protein 2.3-2.4% and N-free extract 4.6-7.8%. Considerable losses in protein content, however, occurred during storage in silos and in earth pits, thru the action of smut-bacteria and contact with air. In pit storage, losses were also found along the unprotected earth walls.

Protein decomposition was greatly reduced

by treatment of the leaves with Amasil (formic acid). Wilting and packing, resulting in the forcing out of most of the air, were more rapid, and the growth of smut-bacteria was checked. Washing to remove bacteria and chopping in a fodder machine aid in reducing protein losses. The use of a lining of the walls of earth pits with silo crepe paper, boards or straw prevented much of the marginal decomposition.—B. Marquardt in *Zuckerrubenbau*.

### New Feed Trade Marks

**Geo. A. Hormel & Co.,** Austin, Minn. The letters ARF, No. 463,231, for dog food.

**Chas. Sponsel,** Albuquerque, N. M. A bar and a half circle, No. 455,520, for feed.

**Wm. T. Crowther & Son,** Boston, Mass. The word Bombo, No. 461,970, for dog food.

**Melvin H. Jacobs,** Chicago, Ill. The words Fire Plug, No. 455,481, for dog and cat food.

**C. Wendel Muench & Co.,** Chicago, Ill. The word Simplicity, No. 463,249, for dog food.

**Earl J. Chappel,** Rockford, Ill. The words Chappie-Mixit, No. 460,320, for canned dog food.

**O. M. S. Corporation,** Belle Center, O. The word Lactamin, No. 463,756, for animal and poultry feed.

**Fort Smith Cotton Oil Co.,** Ft. Smith, Ark. The words Work-Over, No. 464,606, for horse and mule feed.

**Happy Mills,** Memphis, Tenn. The word Cheerful, No. 464,855, for mixed feeds for livestock and poultry.

**Happy Mills,** Memphis, Tenn. The word Friendly, No. 464,856, for mixed feed for livestock and poultry.

**Louisiana State Rice Milling Co.,** Abbeville, La. The representation of a shooting star, No. 465,398, for feeds.

**Wolaver Livestock Service Co.,** Springfield, Ill. The representation of a star and the word Star, No. 461,402, for feeds.

**Commercial Solvents Corporation,** New York, N. Y. The letter and figures B-43, No. 459,901, for supplements for feeds.

**International Elevator Co.,** Minneapolis, Minn. A star and the word Star-hi in blue, red and yellow, No. 462,542, for feeds.

**John Morrell & Co.,** Ottumwa, Ia. The outline of a heart and the words Red Heart, No. 463,547, for food for carnivorous animals.



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## Protein Supplements Compared

Experiments with fattening yearling steers were conducted at Cornell University to determine the relative value of 4 protein supplements (linseed meal, corn gluten meal, soybean oil-meal, ground soybeans) fed with ground corn, corn silage, and a small amount of mixed hay. Steers have come from 4 different sources, and included stockyard Shorthorns, Herefords purchased from the ranch in Texas, Aberdeen-Angus purchased from local breeders, and Herefords purchased from the K. C. stockyards.

There was a slight tendency for linseed oil meal to produce the most rapid gains and for corn gluten to produce slightly less rapid gains. There is no appreciable difference between the lots in the amounts of feed required per 100 lbs. of gain, in the feed cost per 100 lbs. of gain, in the selling price per cwt., or in the dressing percentage.

Individual grades of the animals on foot at the end of the trial placed linseed meal lots slightly first and the corn gluten meal lots were the last. The grader maintained that the soybean oil meal lots were firmer in finish, but he liked the linseed oil meal group best. This he claimed was due to the so-called "bloom." Altho others have had poor results with ground soybeans as a protein supplement for young cattle, it is interesting to note that, under the conditions of these experiments, raw soybeans compare favorably in all respects with the other protein supplements.

## Calcium Carbonate in Oil Meals

By A. L. WARD of National Cottonseed Products Ass'n

From a regulatory standpoint, Feed Control Officials should, in our opinion, continue to permit the sale of a product branded as "Cottonseed Meal and Calcium Carbonate" containing not less than 36 per cent crude protein. Frankly, I believe a 36 per cent crude protein meal supplemented with 3 per cent to 5 per cent calcium carbonate is a better product than a 36 per cent crude protein meal not supplemented with calcium carbonate. Therefore, the question of selling a cottonseed meal, soybean meal, peanut meal or linseed meal as such, or selling them fortified with calcium carbonate and so branded, is a merchandising problem.

The question of fortifying protein meals arose during the past twelve months because of the increased demand for cottonseed hulls and hull bran by furfural plants. The closer culling of hull bran from cottonseed meals is justified economically under present war conditions. This closer culling of hulls from meals, however, produces a cottonseed meal higher in protein content, and decreases the total amount of cottonseed meal from a ton of cottonseed approximately 125 pounds. In the southeastern states, the average yield of 36 per cent protein meal has been 1,005 pounds, whereas the average yield of 41 per cent protein meal will be 880 pounds. These figures are based on data gathered by Law & Co. of Atlanta.

The southeast has, for many years, been using 36 per cent protein meal, and we all know that the present demand for protein meal is greater than ever in the history of our nation, and we know further that the Department of Agriculture has urged the conservation of protein meal and demanded a reduction in the protein content of ready mixed feeds and home mixed feeds, in order to spread the available protein as far as possible. Therefore, it seemed logical for the cotton oil mills of the southeast to continue to produce a 36 per cent protein meal, rather than increase the protein content of the meal offered to the trade, and decrease the tonnage of total available protein feed.

The increase in protein content would be the reverse of the present suggestions and pleas of the Department of Agriculture. The increase in the protein content would have placed on the market a meal richer than the trade has been

accustomed to using, and therefore undoubtedly would have resulted in considerable waste of protein.

## Carotene Destroyed by Some Feeds

Certain animal by-products such as meat scraps, tankage, dried fish and dried milk have the power of destroying carotene. Vegetable feeds very seldom had any carotene destroying power.

The carotene-consuming power is affected by exposure to air, the quantity of the sample, the temperature and the quantity of carotene in relation to the quantity of the sample. Carotene solutions in petroleum ether became activated in a short time so that carotene is lost when the petroleum ether is allowed to evaporate and the mixture to stand over night. Animal by-products may decrease the loss of carotene in such solutions. Milk products may absorb carotene as well as destroy it.

A method of determining the carotene consuming power of feeds is given in detail. Carotene consuming power may change in storage, so that the same sample may give different results at different times. Samples high in carotene consuming power at first may decrease in this power, and those low in carotene destroying power may increase. Exposure to light may increase carotene consuming power. Autoclaving decreased carotene consuming power but the changes were not permanent, even for as short a period as one week.

Both the fat and residue from which the fat had been extracted had carotene consuming power.

The carotene consuming power may have been partly due to fatty acid peroxides, but not entirely. Materials subjected to treatment which should have removed fatty acid peroxides still had a high carotene consuming power.

When meat meal having high carotene consuming powers was fed to rats, in 5 of 9 experiments the livers contained less vitamin A than when similar feed having low carotene consuming power was fed. The differences, however, were comparatively small, and in 4 of the experiments the high carotene consuming power did not decrease the vitamin A stored. Rats fed on a mixture containing 0.1 micrograms of carotene per gram, with meat meal

of high carotene consuming power had a slightly shorter average length of life and attained a lower average maximum weight than rats fed corresponding meat meal with low carotene consuming power. The differences were comparatively small.

Six experiments were made to ascertain the effect of carotene consuming power upon gains in weight and mortality on growing chickens.

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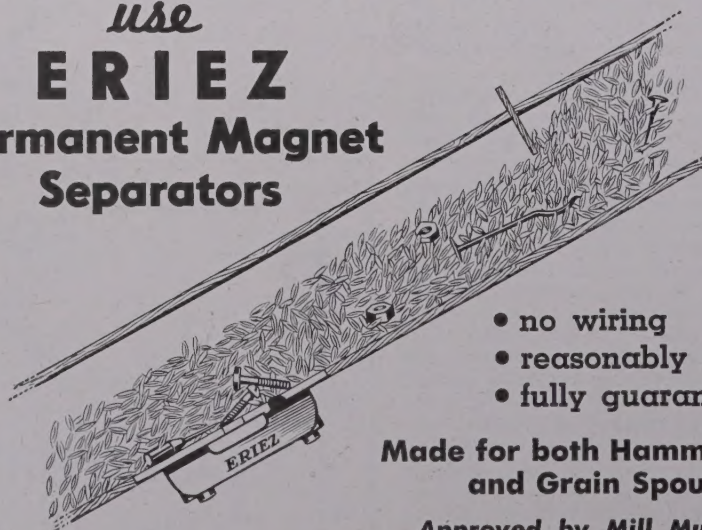
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In 4 of the experiments, the carotene consuming power had no effect. In two of the experiments, the high carotene consuming power was detrimental to the chickens.

Feeds of high-carotene consuming power may sometimes cause injury to chickens through vitamin A deficiency if the ration is low in carotene or vitamin A potency. Otherwise a high carotene consuming power does not appear to be injurious.—Bull. No. 637, Texas Agr. Exp. Sta.

## Urea as a Protein Substitute in War Time

There is a shortage of 1,101,000 tons in protein feeds commonly used for dairy cattle, based upon estimated needs to meet production goals for the current year. If this shortage were borne by the dairy cattle, beef cattle and sheep, to the exclusion of hogs and poultry, it represents 22 per cent of the supply needed.

I. W. Rupel, G. Bohstedt and E. B. Hart report in the *Journal of Dairy Science* that dairy cattle can utilize urea nitrogen for growth and milk production. Fifteen lactations completed on a basal ration of timothy hay, corn silage, with corn and oats as a concentrate, averaged 6675 pounds of 4 per cent fat-corrected milk. The same cows fed the basal ration plus 3 per cent urea in the concentrate averaged to produce 7690 pounds of 4 per cent milk. When 34 pounds of linseed meal replaced as much corn and oats in each 100 pounds of the concentrates, 15 lactations averaged 7790 pounds of 4 per cent milk.

No toxicity was experienced when the urea ration was fed. Quality of product obtained, maintenance of body weight and reproduction on the urea ration was normal. The nitrogen deficit represented by the 1,101,000 ton shortage of protein feeds can be supplied in 128,000 tons of 42 per cent grade urea. In dairy sections, where hay, silage and home grown grains are

available, a suitable nitrogen level in the concentrate mixture can be secured by the inclusion of 3.3 pounds of urea (42 per cent grade) in 100 pounds of the grain mixture.

Full value from urea may be obtained only when the total protein equivalent intake (based on total N) is not in excess of feeding standard requirements. Computations of replacement values show urea (42 per cent grade) to be worth \$113 per ton when other feeds are priced per ton as follows: linseed meal \$45, corn and oats \$35, timothy hay \$15 and corn silage \$5.

## Calcium and Phosphorus Requirements

Calcium (lime) and phosphorus requirements may well be considered together for several reasons. A large percentage of the calcium and phosphorus stored in the body is deposited in the bones in the rather constant ratio of about twice as much calcium as phosphorus. Milk and eggs contain considerable quantities of calcium and phosphorus. The animal body can use calcium and phosphorus independently of each other to only a limited extent. The utilization of both calcium and phosphorus is intimately tied up with vitamin D.

An ample supply of vitamin D (or its equivalent in sunshine) is necessary for the proper utilization of the calcium and phosphorus contained in the ration. Disturbances in calcium and phosphorus nutrition in farm animals are shown in a variety of ways, including rickets and like disorders, retarded growth, decreased milk production, reproductive disturbances, and depraved appetite. Cattle most frequently suffer from phosphorus deficiency, pigs from calcium deficiency and poultry from vitamin D deficiency.

The exact calcium and phosphorus requirements of farm animals are not known. In a general way, these requirements are known to

vary with the species of animal, the rate of growth, reproductive requirements, and the production of milk or eggs. For cattle it may be assumed that a ration is not likely to be seriously deficient in calcium and phosphorus unless its dry matter contains less than about 0.3 to 0.4 per cent calcium and 0.2 to 0.3 per cent phosphorus. Even lower levels are adequate in the absence of rapid growth or high milk production. The calcium and phosphorus requirements of pigs are thought to be slightly higher. The requirements for sheep appear to be distinctly lower than for cattle. The minimum requirements for growing chickens are met when the ration contains about 0.8 per cent calcium and 0.5 per cent phosphorus. The calcium requirements for egg production are perhaps twice as high as for growth.

**CALCIUM AND PHOSPHORUS CONTENTS OF FEEDSTUFFS.**—It is obvious that feedstuffs should be chosen with some attention to their calcium and phosphorus contents. It is usually most economical (except in the case of poultry) to combine easily available feedstuffs in such a manner as to provide adequate amounts of calcium and phosphorus. It is necessary, therefore, to know the approximate calcium and phosphorus contents of the more common types of feedstuffs.

It will be noted that the grains are low in calcium but moderately rich in phosphorus. Wheat byproducts and the oil meals are rich in phosphorus. Milk is a good source of both calcium and phosphorus. Meat meal, fish meal, and tankage (depending on their bone contents) are very rich in calcium and phosphorus. Legume hays are always rich in calcium but may be relatively poor in phosphorus.

The phosphorus content of forage crops is subject to considerable variation due to the influence of the stage of maturity and rainfall. The phosphorus content of pastures and hays is highest during the early stages of growth and during seasons having adequate rainfall.—Oregon Station Circ. 153.

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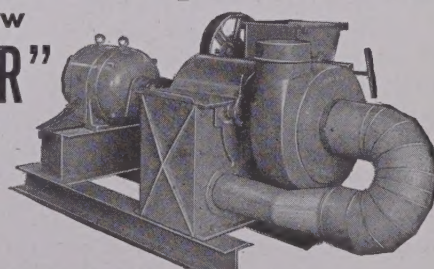
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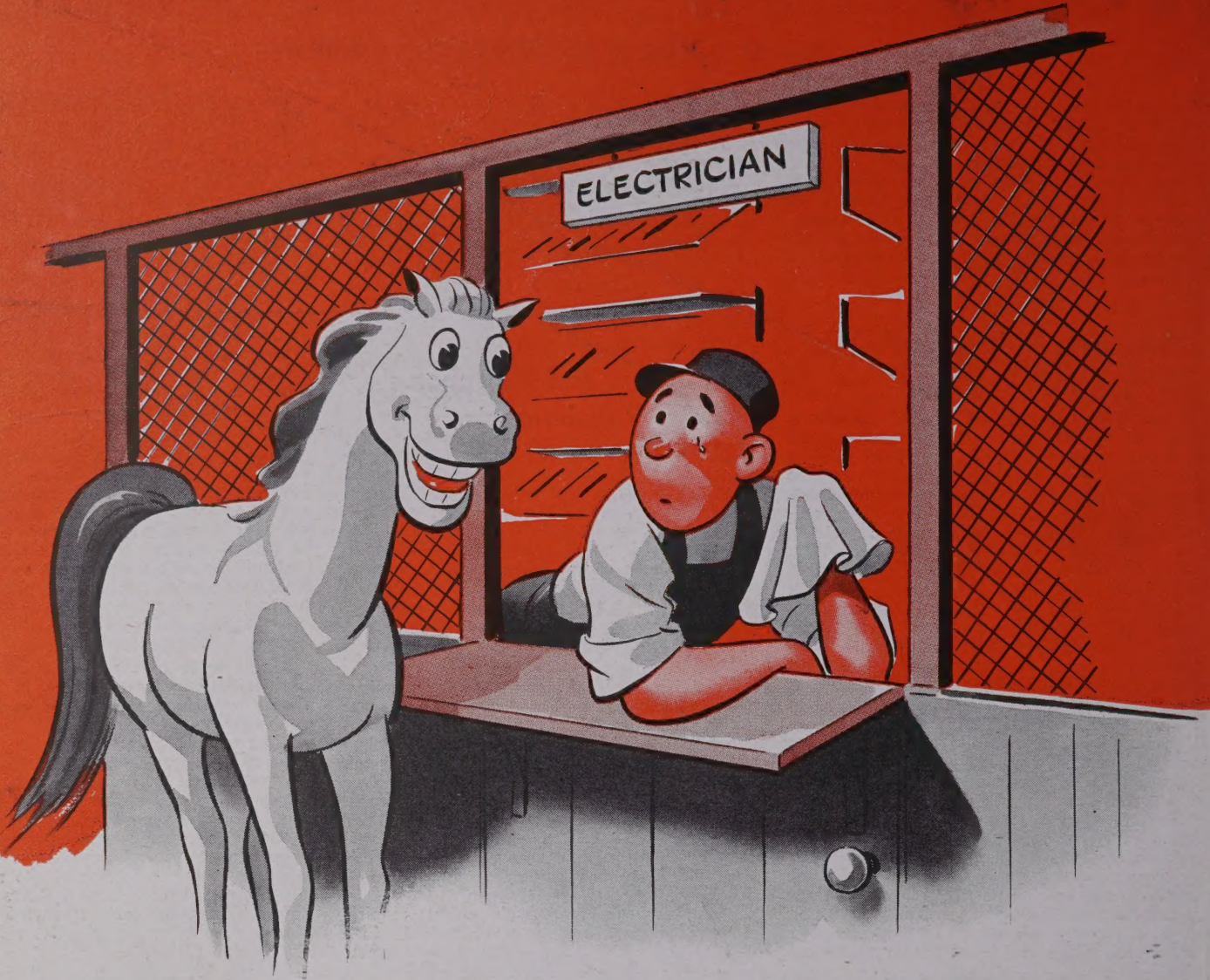
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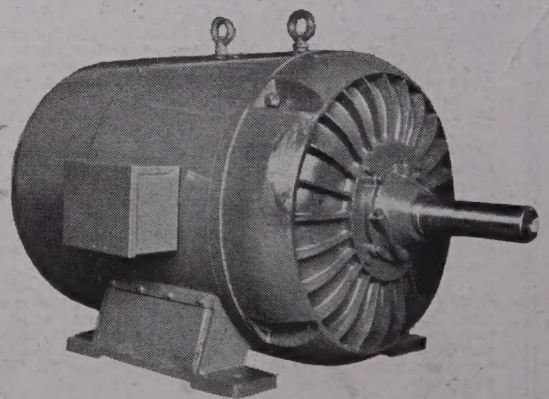
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